

# Technical Memorandum

## Threatened and Endangered Species Assessment

For

Blue Water Bridge Plaza Study  
St. Clair County, Michigan

**MDOT Contract No. 2002-0512  
JN 57779**

Prepared by



Prepared for  
Wilbur Smith Associates, Inc.,  
U.S. Department of Transportation Federal Highway Administration  
and  
Michigan Department of Transportation

March 2005

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## SUMMARY

The Michigan Department of Transportation (MDOT) contracted with Wilbur Smith Associates, Inc. (WSA) to identify alternative improvements for the U.S. Plaza of the Blue Water Bridge in the City of Port Huron, MI. The Blue Water Bridge is an international bridge spanning the St. Clair River between the U.S. and Canada. The study will include evaluation of alternative plaza configurations and expansion options, potential operational improvements on the U.S. and Canadian sides of the border, and potential locations for off-site facilities.

Wetland and Coastal Resources, Inc. (WCR) was contracted by WSA to perform threatened and endangered (T&E) plant and animal species assessments within the project area. The purpose of these efforts was to (1) identify if T&E species are present within the project area, (2) identify if habitat for T&E species is present within the project area, and (3) identify potential impacts to T&E species and/or their habitats for each alternative.

Thirty-three habitat areas were identified within the project area. The majority of habitats consist of developed land, disturbed land, farm field, old field, road side ditches, maintained road right-of-way, and scattered, segmented wetland areas with relatively low native plant diversity. No T&E plant species were found within the project area and none of the alternatives are expected to impact habitat for T&E plant species.

No T&E animal species were found within the project area. However, habitat that could be used by the State-threatened spotted turtle (*Clemmys guttata*) is present within the central portion of the project area, north and south of I-94 at Stocks Creek. Alternative 3 is the only alternative that impacts this habitat. The majority of impact is associated with areas south of I-94, where spotted turtle habitat is less prevalent than areas north of I-94. Alternative 3 impacts within areas north of I-94 are expected to be minimal, with the majority of work restricted to the existing road right-of-way.

All three alternatives propose impacts to the Black River, where the State-endangered round hickorynut (*Obovaria subrotunda*) has been recorded to occur. Sediment analysis revealed that habitat for the mussel is not present within the project area. None of the three alternatives are expected to impact the mussel or its habitat.

Precautionary measures and appropriate construction sequencing are recommended when working within potential spotted turtle habitats. WCR recommends coordination with Michigan Natural Features Inventory for design and planning of avoidance and protection techniques.

## **1.0 INTRODUCTION**

Alternative alignments for the Blue Water Bridge Plaza Study are currently under review by the Michigan Department of Transportation (MDOT) and contracted consulting groups. Wilbur Smith Associates, Inc. (WSA) was chosen as the prime consultant to, in part, conduct studies and assess alternative alignments for the proposed Blue Water Bridge Plaza Study and to prepare an Environmental Assessment (EA).

On August 22, 2003, WSA authorized Wetland and Coastal Resources, Inc. (WCR) to perform threatened and endangered (T&E) species assessments for both plants and animals within the project area. Wetland and Coastal Resources conducted the assessments focusing on habitat reviews for potential T&E species that were identified by the Michigan Department of Natural Resources (MDNR), Wildlife Division.

This technical memorandum provides recommendations and discussion, with respect to T&E impacts associated with each of the three Blue Water Bridge Plaza expansion alternatives. The information and analysis associated with this report represent the opinions and professional judgment of WCR. State and Federal regulatory agencies have the final authority in matters of threatened and endangered species permitting issues.

### **1.1 Project Area**

The project area for the Blue Water Bridge Plaza Study located in St. Clair County, Michigan (**Figure 1.1, Attachment A-1 of Appendix A**). Threatened and endangered species assessments were conducted throughout the entire project area.

### **1.2 Project Purpose**

The purpose of conducting the threatened and endangered species assessments was to identify any terrestrial or aquatic biota, or habitat, that is Federal or State listed within the project area, and to identify and discuss any potential impacts that may occur to these species or habitats with respect to the three plaza alternatives. This technical memorandum is being presented to WSA, MDOT, and the Federal Highway Administration to be utilized as part of an environmental assessment and to assist in developing and assessing project alternatives.

## 2.0 METHODS

### 2.1 Literature Review and Field Preparation

Prior to conducting field investigations, WCR obtained data and information from various sources to provide initial direction and focus for field assessments. The United States Department of Agriculture (USDA) Soil Survey for St. Clair County, St. Clair County Plat Book, St. Clair County Element List (courtesy of MDNR), and United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps were obtained to assist with field assessments. Additionally, a request was made to the MDNR and Michigan Natural Features Inventory (MNFI) for records and information on threatened, endangered species, and species of concern previously identified within the project area or surrounding areas.

Specific target habitat and target species were identified based on information received from the MDNR and MNFI, and literature reviews conducted by WCR. Target species are those species listed as threatened, endangered, or species of concern by MDNR and MNFI, and determined by past studies and literature reviews to potentially exist within the Blue Water Bridge Plaza Study project area. Target habitats are those habitats identified in the literature and past studies that support the target species.

Letters from MDNR to WCR, identifying State-listed species to be assessed, are included in **Attachment B-1 of Appendix B**, and the St. Clair County Element List (**Table 2.1**) is included in **Attachment C-1 of Appendix C**. Species identified as target species are shown in **Table 2.2 (Attachment C-2 of Appendix C)**.

To optimize WCR's ability to observe and assess target species and habitats, a number of factors were considered when planning field assessments. These factors included, but were not limited to, target habitats, target species, assessment methods, number of wetland and upland complexes to be assessed, assessment times (day of the year) and weather conditions. Information as to optimal sampling periods and habitats were obtained from professional experience and MNFI Abstracts.

Field assessments were scheduled to ensure that target habitats and species were assessed during optimum times for viewing and/or identification. WCR staff reviewed Voss (1972, 1985, and 1996), Gleason and Cronquist (1991), and Holmgren (1998) for specific diagnostic features associated with specific plants and plant communities identified in St. Clair County Element List. Descriptions of habitat and key species identification features were disseminated to all WCR field biologists prior to conducting field assessments.

Aerial photography (supplied by WSA), USDA Soil Survey Maps, and NWI maps of the project area were used to help identify habitats. Prior to conducting field assessments, maps were produced from these sources to aid field biologists in identifying approximate locations and sizes of specific habitat areas.

### 2.2 Field Assessment Methodologies

Assessments were conducted in accordance with Section 365, of the Natural Resources and

Environmental Protection Act (NREPA), P.A. 451 of 1994, as amended, and “Guidelines for Conducting Endangered and Threatened Species Surveys”, as set forth by the MDNR Wildlife Bureau’s Endangered Species Coordinator. Field assessments required a minimum of two (2) WCR biologists to visually inspect all of the project area and to record all observations and sightings of terrestrial and aquatic plant and/or animal species present. Habitat types were identified and differentiated based on plant communities and physical features associated with each habitat. WCR identified and recorded the plants species within each habitat type and sketched the boundaries of each habitat on aerial photographs. The Geographic Information System (GIS) software ArcMap (ESRI, Inc.) was used to create habitat maps by developing layers for each habitat area based on field sketches.

Areas being actively farmed or part of residential development were not traversed or assessed in detail, unless located adjacent to habitat that could support threatened and endangered species. Photographs were taken of many of the habitat areas to record the quality of the habitat area, physical land features and the potential to support a listed threatened or endangered species.

The MDNR’s Floristic Quality Assessment program (Herman et al. 1996) was used to assess floristic quality. This program calculates several metrics based on the diversity of plant species present within a given area. These metrics are used to identify the significance of plant communities and their potential to harbor State or Federally threatened, endangered, candidate, or special concern plant and animal species.

The FQA requires inventory of all species present within each habitat area. WCR biologists meandered through each habitat and identified all vegetation to the species level, where feasible. Plant species that could not be identified in the spring were noted, revisited, and identified during subsequent assessments later in the growing season. Plants with the same Genus as listed threatened and endangered species were double-checked in the field and, where necessary, returned to the lab for further identification.

Plant species present within each habitat area were entered into the MDNR Floristic Quality Assessment program. This program was used to calculate and assess floristic metrics for each area using numeric values (i.e. coefficients for conservatism) to determine how representative a plant community is to native pre-settlement conditions (Herman et al, 1996). Coefficients of conservatism (C values) are assigned to each native plant species, ranging from 0-10, to quantify the affinity of that plant to be representative of a pre-settlement plant community. Non-native plant species are given no value and are denoted by an asterisk (\*). The more indicative a plant community is of pre-settlement plant communities, the higher it’s floristic quality index (FQI) and its likelihood of containing threatened, endangered, and/or species of concern. Conversely, plant communities that are subjected to many types of human disturbances have greater numbers of invasive plant species; have relatively lower FQI ratings, and less likelihood of containing threatened, endangered, and/or species of concern.

### 2.2.1 Wildlife Assessments

Two animal species, the spotted turtle (*Clemmys guttata*) and round hickorynut (*Obovaria subrotunda*), were identified by MDNR and MNFI as having potential to exist within the project area (**Attachment B-1 of Appendix B**). Information on preferred habitats, identification

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characteristics, and optimal time periods to assess these two target species were obtained from Carman 2001, Lee 2000, and Harding et al 1990. **Table 2.2 (Attachment C-2 of Appendix C)** shows the optimal assessment times for these species.

Assessment for the spotted turtle consisted of thorough searches through target habitats. June assessments focused on review of reproductive habitats and areas of potential movement to and from these habitats. Less extensive searches were conducted through non-target areas.

Assessment for the round hickorynut focused on water quality observations and sediment characterization on the Black River. A six-inch petite PONAR dredge was used to collect sediment samples at 14 locations within the vicinity of the mouth of Stocks Creek and the I-94 overpass. Two samples were preserved and taken back to the lab for identification of adult macroinvertebrates (see WCR, Technical Memorandum, Fisheries and Aquatic Biota Assessment, 2004 for results).

Substrate types were generally characterized on site after each sample was taken. Substrate identification was used to determine if suitable habitat exists for the round hickory nut. Substrates were identified as sand, silt, clay, organics, or a combination of these types.



### 3.0 RESULTS

Threatened and endangered species assessments commenced at the beginning of September 2003 and continued through to the end of July 2004. **Table 3.1 (Attachment C-3 of Appendix C)** identifies when surveys were conducted. No threatened, endangered, or special concern species were found within the project area.

#### 3.1 Plant Communities and Habitat Area Descriptions

Thirty-three habitat areas were identified within the project area. **Figures 3.1 – 3.4 (Attachment A-2 of Appendix A)** show the location of the habitats identified and **Table 3.2 (Attachment C-4 of Appendix C)** lists the plant species identified within each area. **Appendix D** contains representative photographs of the habitat types identified. Each habitat area is briefly described below. Refer to WCR, Technical Memorandum, Wetland Delineation and Functional Assessment, 2004 for more information on the wetlands complexes identified within the descriptions below.

##### Area 1

- All developed areas consisting of MDOT buildings, residential, industrial and commercial buildings, surface streets, highway pavement, maintained highway right-of-ways, manicured upland, upland median areas (maintained and not maintained), and bridges.
- Located throughout the entire project area.
- Dominant vegetation throughout this area includes a variety of native, adventives, and cultivated species.

##### Area 2

- An open upland field.
- Located in the northeast portion of the project area, on the east side of the Black River.
- Portions of the area have been disturbed (presence of old fill).
- Dominant plant species are common ragweed (*Ambrosia artemisiifolia*), Canadian thistle (*Cirsium arvense*), and tall goldenrod (*Solidago altissima*).
- Shrubs scattered throughout the area include common blackberry (*Rubus allegheniensis*), black raspberry (*Rubus occidentalis*) and wild red raspberry (*Rubus strigosus*).

##### Area 3

- West section of area is upland woods and east section is open field and mowed lawn.
- Located in the northeast portion of the project area, on the east side of the Black River, adjacent to Area 2.
- Bordered by residential property along the north, south, and west.
- Mature trees include box elder (*Acer negundo*), white ash (*Fraxinus americana*), and red oak (*Quercus rubra*).

##### Area 4

- Large fallow farm field.
- Located in the western portion of the project area, north of I-94.
- Heavily dominated by queen anne's lace (*Daucus carota*) and common ragweed.

**Area 5**

- Large active farm field located next to Area 4.
- Soybeans present during 1993 site inspections and corn present during 1994.
- Located in the western portion of the project area, north of I-94.

**Area 6**

- Disturbed land located northeast of Area 4.
- Contains dredge spoils from Area 20 (pond).
- Gravel access road with fill traverses this area.
- Common ragweed is dominant.

**Area 7**

- Upland hedgerows that separate Areas 4 and 5.
- Dominated by gray dogwood (*Cornus foemina*) and common buckthorn (*Rhamnus cathartica*).

**Area 8**

- Upland forest with scattered pockets of young forested wetlands.
- Dominated by young trees with mature trees present at the southern end.
- Dominant tree and shrub species include red maple (*Acer rubrum*), paper birch (*Betula papyrifera*), American elm (*Ulmus americana*), and witch hazel (*Hamamelis virginiana*).

**Area 9**

- Old upland field with scattered pockets of emergent, scrub-shrub, and forested wetlands.
- MDOT maintenance shed and entrance/exit ramps located adjacent to this area.
- Located in the southwest portion of the project area, south of I-94.
- Dominant plant species include queen anne's lace, Canada bluegrass (*Poa compressa*), tall goldenrod and ox eye daisy (*Chrysanthemum leucanthemum*).
- Shrubs scattered throughout the area include multiflora rose (*Rosa multiflora*), black raspberry, and gray dogwood.

**Area 10**

- Spoil pile along right-of-way fence, bordering the southern edge of Area 4.
- Dominant plant species are queen anne's lace, Canadian thistle, and tall goldenrod.

**Area 11**

- Large spoil piles located next to the MDOT maintenance facility in Area 9.

**Area 12**

- Upland field scattered with trees and shrubs.
- Located along the eastern edge of Area 9
- Ground elevation approximately 10 feet above I-94 pavement.
- Dominant plant species include hairy aster (*Aster pilosus*), gray dogwood, hawthorn (*Crataegus spp.*), tall goldenrod and ox eye daisy.

**Area 13**

- All roadside ditches located throughout the project area.
- Dominant plant species include reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and narrow leaved cattails (*Typha angustifolia*).

**Area 14**

- Includes the Black River and adjacent emergent wetlands.
- Located at the northeast section of the study area, where I-94 crosses the Black River.
- Includes vernal areas under I-94 bridge, which are present as a result of soil compaction.
- Dominant plant species includes reed canary grass and common reed.

**Area 15**

- Linear emergent scrub-shrub wetland (linear ditch).
- Located along the length of the Bridge Harbor Yacht Club, next to the Black River.
- Top of bank is 4-6 ft above wetland surface.
- The wetland is dominated by common reed.

**Area 16**

- Emergent wetland along the north side of I-94.
- A small stream (Stocks Creek), approximately 3-4 ft wide, flows through the area.
- The dominant plant species include reed canary grass, common reed, and broad-leaved cattail (*Typha latifolia*).

**Area 17**

- Emergent, scrub-shrub, and wet meadow wetland located along the south side of I-94.
- Wetland present on slopes indicating potential groundwater seeps.
- A small stream (Stocks Creek) flows through the area and the area is surrounded by scattered forested areas.
- The stream is approximately 3 ft wide with a clear water and moderate flow.
- A large area of wet meadow is present, dominated by reed canary grass.

**Area 18**

- Forested wetland surrounding a small scrub-shrub wetland.
- Located adjacent to Area 17, south of I-94.
- Dominant plant species within the forested wetland areas include swamp white oak (*Quercus bicolor*) and blue beech (*Carpinus caroliniana*).
- Dominant plant species with the emergent scrub-shrub wetland include gray dogwood, red osier dogwood (*Cornus stolonifera*) and common lakeshore sedge (*Carex lacustris*).

**Area 19**

- Forested scrub-shrub upland pocket.
- Located between Areas 17 and 18 on the south side of I-94, adjacent to Stocks Creek.
- A footpath runs through this area along the stream.
- The dominant plant species include hawthorn and tall goldenrod.

**Area 20**

- Open water pond with emergent fringe.
- Sparse vegetation is present.
- The pond has recently been excavated and has eroding banks.
- The dominant plant species include path rush (*Juncus tenuis*) and narrow leaved cattail.

**Area 21**

- Forested upland area located northeast of Area 18.
- Steep upland slopes present.
- The dominant plant species include large mature trees such as gray dogwood, red maple (*Acer rubrum*) and witch hazel.

**Area 22**

- A scrub-shrub old field with scattered trees.
- Located adjacent to Area 21, south of I-94.
- Elevation is approximately 10 feet above the I-94 pavement.
- Includes a small, linear wetland that seasonal discharges water to I-94 road ditch.
- Dominant plant species include hawthorns, ox eye daisy and gray dogwood.

**Area 23**

- A coniferous/deciduous mixed upland forest surrounding a forested wetland.
- Dominant wetland plant species include red ash (*Fraxinus pennsylvanica*), fowl manna grass (*Glyceria striata*) and glossy buckthorn (*Rhamnus frangula*).
- Dominant upland plant species include white ash and red pine (*Pinus resinosa*).

**Area 24**

- An old field scattered with shrubs, including gray dogwood and autumn olive (*Elaeagnus umbellata*).
- Located adjacent to Area 23.
- The dominant plant species are smooth brome (*Bromus inermis*), wild strawberry (*Fragaria virginiana*), and Canada bluegrass (*Poa compressa*).

**Area 25**

- Forested scrub-shrub wetlands (wetland complexes 24-31) with emergent/wet meadow understory.
- Located south of I-94 in the southwest portion of the study area.
- Dominant plant species include eastern lined aster (*Aster lanceolatus*), gray dogwood, red ash, and American elm.

**Area 26**

- Linear emergent wetland areas (complexes 22 and 23).
- Potentially excavated to drain fields.
- Located south of I-94 in the western portion of the study area.
- Vegetation is scattered throughout the area and standing water is present.
- Dominant plant species is reed canary grass, however vegetation is sparse, and bare, saturated soil dominates the areas.

**Area 27**

- Small emergent wetland pockets scattered throughout the western portion of the study area.
- Includes wetland complexes 10, 14, 16, 32, 33, 48, and 49.
- Dominant vegetation varies with each wetland pocket.

**Area 28**

- Predominantly a forested wetland with small emergent pockets.
- Located west of I-94 in the southwest corner of the study area.
- Dominant plant species include red maple, blue beech, and false nettle (*Boehmeria cylindrica*).

**Area 29**

- A series of forested wetland pockets (wetland complexes 4-7) located north of I-94 within area 28.
- Each forested area drains toward roadside ditches along I-94.
- Dominant plant species include red ash and American elm.

**Area 30**

- Predominantly forested wetland area with a scrub-shrub emergent understory (wetland complexes 1 and 2).
- Located on the west side of I-94 adjacent to a trailer park.
- Visual signs of hydrology include standing water and saturated soils.
- Numerous amphibians, primarily frogs, were present.
- The dominant tree species include red ash, cottonwood (*Populus deltoides*), American elm, grey dogwood, spotted touch-me-not (*Impatiens capensis*) and sensitive fern (*Onoclea sensibilis*).

**Area 31**

- Emergent and scrub-shrub wetlands (wetland complexes 11 and 12) located in the northeast corner of a fallow farm field (Area 4).
- An intermittent stream is present, adjacent to wetland complex 12.
- Dominant plant species include spotted touch-me-not and reed canary grass.

**Area 32**

- Scrub-shrub wetland complex with a wet meadow pocket and scattered young trees.
- Located along the east side of Area 4.
- Dominant plant species include gray dogwood, silky dogwood, poison ivy (*Toxicodendron radicans*), and riverbank grape (*Vitis riparia*).

**Area 33**

- Scrub-shrub wet areas within a hedgerow separating Areas 8 and 9.
- A swallow ditch is present that is currently being used to drain water from adjacent farm fields.
- Dominant plant species include gray dogwood, riverbank grape, and nannyberry (*Viburnum lentago*).

The majority of the project area consists of developed land, disturbed land, farm field, old field, road side ditches, maintained road right-of-way, and scattered, segmented wetland areas with relatively low native plant diversity. Floristic Quality Index values for these areas are low, ranging from 0.4 to 11.5, with nearly 70% below a value of 5.0 (**Table 3.3, Attachment C-5 of Appendix C**).

All habitat areas had FQI values less than 20, ranging from 0.4 to 19.1 (**Table 3.3, Attachment C-5 of Appendix C**). Floristic Quality Index values were highest for habitat areas 28 and 30 (19.1 and 18, respectively), where the highest diversity of native plant species was found.

Habitat areas 16, 17 and 18 are part of a single wetland complex, separated by I-94, which provides a relatively high diversity of habitats. These areas had low FQI values (3.0, 6.0, and 11.5, respectively), but are part of a large wetland complex contiguous to Stocks Creek. These areas also contain potential habitat for the spotted turtle.

### **3.2 Wildlife Assessments**

#### **3.2.1 Spotted Turtle**

The spotted turtle occurs in a variety of wetland habitats, but is most commonly found in or near bogs or boggy ponds, fens, sphagnum seepages, and grassy marshes. This species prefers shallow, clean water with mud bottom and clumps of sedge or marsh grass. (Lee 2000). Nesting occurs in mid-June on well-drained, loamy or sandy soils exposed to full sunlight.

Fens, bogs, and sphagnum seeps are not present within the project area. However, grassy marshes are present in areas 16 and 17. Both areas are dominated by reed canary grass and open water is present, but only within the banks of Stocks Creek.

Field assessments for the spotted turtle focused on searches within and adjacent to habitat areas 16, 17 and 18. The letter from MNFI (**Attachment B-1 of Appendix B**) specifically identified the marsh adjacent to Stocks Creek (Areas 16 and 17) as potential habitat for this species. Area 16 consists of a large emergent and wet meadow wetland adjacent to Stocks Creek. This area is surrounded by upland slopes where potential nesting habitat exists. These areas were reviewed throughout the study period, but were more intensively searched during June 2004. Although potential habitat for the spotted turtle is present within this area, no turtles were observed.

Area 17 also contains potential habitat for the spotted turtle, but to a lesser degree than Area 16. Wet meadow wetland is present adjacent to Stocks Creek, but with a higher concentration of shrubs. Area 18 is also adjacent to Stocks Creek but is primarily forested with seasonal standing water present. No turtles were observed within areas 17 or 18 during field assessments. **Figure 3.5 (Attachment A-3 of Appendix A)** shows graphic enlargements of areas 16, 17 and 18.

### 3.2.2 Round Hickorynut

The round hickorynut is most commonly found near the mouth of medium and large rivers with sand and gravel substrates, in areas of moderate flow (Carman 2001). The letter from MNFI (**Attachment B-1 of Appendix B**) specifically identified the Black River as potential habitat for this mussel species.

The Black River within the project area has a wide, linear channel that has been dredged in the past. Water clarity of the river during all site reviews was poor with high turbidity. A boat launch is present immediately upstream of I-94 and the river has been widened immediately downstream, where marinas are present. Riverbanks show signs of erosion and contain large amounts of debris including old boats, broken concrete, and household refuse.

Fourteen sediment samples were collected on the Black River using a petite PONAR dredge (6"x6"). **Figure 3.6 (Attachment A-4 of Appendix A)** identifies the approximate location of the samples collected. **Table 3.4 (Attachment C-6 of Appendix C)** lists the sediment types found within each sample.

Twelve of the 14 samples (2-3 and 5-14) consisted of fine sediments dominated by silts, clays and organics. Two samples that were collected at the mouth of Stocks Creek (1 and 5) consisted of coarse sands that are consistent with substrate types preferred by the round hickorynut. All samples were reviewed for the presence of the round hickorynut and samples 1 and 5 were taken to the lab for identification of benthic organisms (Results in WCR, Technical Memorandum, Fisheries and Aquatic Biota, 2004). The round hickorynut was not found in any sample.



## 4.0 DISCUSSION

### 4.1 Plant Communities

No T&E or special concern plant species were found within the project area and none of the identified areas contain FQI values indicative of floristic significance. It is WCR's opinion that no T&E plant species will be impacted by any of the three alternatives under consideration.

Five of the 33 habitat areas identified (Areas 16, 17, 18, 28, and 30) consist of relatively large or diverse wetland complexes. While these areas are not believed to harbor T&E plant species, they are identified as the highest quality habitats present within the project area. Areas 28 and 30 are not impacted by any of the three alternatives, but Alternative 3 requires impact to areas 16-18. **Table 4.1 (Attachment C-7 of Appendix C)** lists the FQI value for each habitat area and identifies which areas are impacted by one or more of the three expansion alternatives.

### 4.2 Wildlife Communities

#### 4.2.1 Spotted Turtle

The December 16, 2002 letter from the MDNR identifies that the spotted turtle is known to have been present within the wetlands adjacent to Stocks Creek, but the record of this observation is old (1934) and a specific location was not identified. Site assessments and searches within the wetlands associated with Stocks Creek did not result in a new sighting of the turtle. However, habitat types known to be used by the spotted turtle are present within areas 16, 17 and 18.

Area 16 contains monotypic stands of reed canary grass with no open water areas except within the banks of Stocks Creek. The spotted turtle requires clean, shallow, slow moving bodies of water with muddy or mucky bottoms and some aquatic and emergent vegetation (Lee 2000). These types of aquatic habitats are absent from Area 16, with some minor exceptions within Stocks Creek. However, the turtle is known to utilize a variety of habitats during certain times of year, including wet meadow areas, which are present within Area 16.

Based on review of aerial photographs and site inspections, habitats preferred by the turtle are more prevalent downstream of the project area. A higher percentage of slow moving and/or shallow open water are present north and east of Area 16. These downstream areas also contain large areas of emergent and wet meadow wetland areas.

Habitat Area 17 contains wet meadow and scrub-shrub areas near Stocks Creek and Area 18 contains forested wetland with an open area containing seasonal standing water. Combined, these areas include a higher diversity of habitats and a significantly higher amount of woody plants than Area 16, but contain less preferred habitat for the spotted turtle.

Alternative 3 is the only alternative that proposes impacts to Areas 16, 17 and 18. The majority of impact is associated with areas south of I-94 (Area 17), where potential habitat for the turtle exists, but to a lesser degree than Area 16. Within the area of Stocks Creek, Alternative 3 proposes the majority of work south of I-94 within Areas 17 and 18. Minor



impacts are also proposed within Area 16 along the I-94 right-of-way. These impacts are associated with new lane construction necessary to accommodate traffic to and from the Blue Water Bridge crossing and off-site plaza areas to the west. Relocation of the new lanes to the north would minimize impacts to the more diverse habitats associated with Areas 17 and 18, but would require greater impacts to potential spotted turtle habitat associated with Area 16.

#### **4.2.1 Round Hickorynut**

The December 16, 2002 letter from the MDNR identifies that the round hickorynut has been known to inhabit the Black River, but the record of this observation is old (1930) and a specific location was not identified. Sediment sampling within the vicinity of I-94 revealed river bottom sediments consisting of fine silts, clays, and organics. These substrate types are not consistent with habitat requirements for the round hickory nut and its presence would not be expected within the vicinity of I-94.

Two samples upstream of I-94, at the mouth of Stocks Creek, contained coarse sands, which are one of the preferred substrates for the mussel. All three alternatives propose additional I-94 lane construction at the Black River crossing that may involve bridge removal and reconstruction. However, impact areas for all three alternatives are restricted to areas with fine sediments and do not extend upstream where coarse sand is present. Therefore, impacts to habitats preferred by the round hickorynut are not expected with any of the three alternatives.

## 5.0 CONCLUSIONS

No T&E plant species were found within the project area and none of the 3 alternatives are expected to impact any T&E plant species. All plant communities within the project area were found to have low floristic significance from a natural perspective. However, five areas (16, 17, 18, 28, and 30) have relatively high plant diversity and/or are larger wetland complexes that provide significant wildlife habitat. Alternative 3 is the only alternative that impacts the higher quality habitats.

No T&E animal species were found within the project area. However, habitat that could be used by the spotted turtle is present within Areas 16, 17, and 18. Alternative 3 is the only alternative that impacts these habitats. The majority of impact is associated with Areas 17 and 18 where spotted turtle habitat is less prevalent. Although Alternative 3 requires impacts within Area 16, they are expected to be minimal since the majority of work is restricted to the existing road right-of-way.

All three alternatives propose impacts to the Black River, in which the round hickorynut has been recorded to occur. Sediment analysis revealed that habitat for the mussel is not present within the project area and none of the three alternatives are expected to impact the mussel or its habitat.

Precautionary measures and appropriate construction sequencing are recommended when working within potential spotted turtle habitats. Timing of construction should avoid habitats used by the turtle during that particular time of year. Thorough searches should be conducted for the turtle within the area of work, and if found, relocated to an appropriate habitat outside work areas. Barriers should also be constructed to prohibit re-entry of the turtle into the work zone.

## 6.0 RECOMMENDATIONS

The following are WCR's recommendations based on the findings of this threatened and endangered species assessment, and an overall assessment of the project.

- No threatened or endangered plant species are expected to be impacted by Alternative 1, 2, or 3. However, habitat Areas 16, 17, 18, 28, and 30 contain relatively high quality habitats.
  - Areas 16, 17, and 18 will not be impacted by Alternatives 1 or 2, but will be impacted by Alternative 3. Avoidance of these areas is recommended. If avoidance is not prudent or feasible, the areas of impact should be minimized to the greatest extent possible.
  - Alternatives 1, 2, and 3 currently avoid areas 28 and 30. However, impacts associated with Alternative 3 are within close proximity to these wetland areas, and construction techniques (e.g. soil erosion control measures) should be employed to avoid inadvertent impacts to these areas.
- All three alternatives propose impacts to the Black River, but outside of preferred habitats for the state endangered round hickorynut.
  - Any construction alternative should provide for proper soil erosion control measures to avoid sediment input into the river.
  - Any construction alternative should include suitable slope design and final stabilization techniques to avoid long-term erosion and sedimentation to the river.
- Alternative 3 will result in impact to habitats that could be used by the state threatened spotted turtle. Alternatives 1 and 2 do not impact preferred habitats of the spotted turtle.
  - Construction methods and timing should avoid specific habitats during specific times of year. For example, construction from October-March should avoid open water areas with mud bottoms where the turtle hibernates.
  - A thorough search should be conducted for the turtle within the area of work, and if found, the turtle should be relocated to an appropriate habitat outside work areas. Barriers should also be constructed to prohibit re-entry of the turtle into the work zone.
  - WCR recommends coordination with Michigan Natural Features Inventory for design and planning of avoidance and protection techniques.

## 7.0 LIST OF REFERENCES

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- Voss, E.G. 1985. Michigan Flora. Part II. Dicots (Sauraceae - Cornaceae). Bull. Cranbrook Institute 55 and University of Michigan Herbarium, MI. 724 pp.
- Voss, E.G. 1996. Michigan Flora. Part III. Dicots (Primulaceae – Asteraceae). Bull. Cranbrook Institute 55 and University of Michigan Herbarium, MI. 622 pp.
- WCR , Technical Memorandum, Fisheries and Aquatic Biota Assessment, 2004. Prepared for Wilbur Smith and Associates as part of resource impact assessments for the Blue Water Bridge Plaza Expansion Project. Unpublished.
- WCR , Technical Memorandum, Wetland Delineation and Functional Assessment, 2004. Prepared for Wilbur Smith and Associates as part of resource impact assessments for the Blue Water Bridge Plaza Expansion Project. Unpublished.

## **8.0 LIST OF PERSONS AND AGENCIES CONTACTED**

- Michigan Department of Natural Resources
  - Mrs. Lori Sargent, Endangered Species Specialist
- Michigan Natural Features Inventory
  - Ms. Y. Lee, Biologist
- Wilbur Smith Associates, Inc.
  - Mr. Todd Davis, Manager, Environmental & Transportation Planning Services

## 9.0 LIST OF PREPARERS

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# **APPENDIX A**

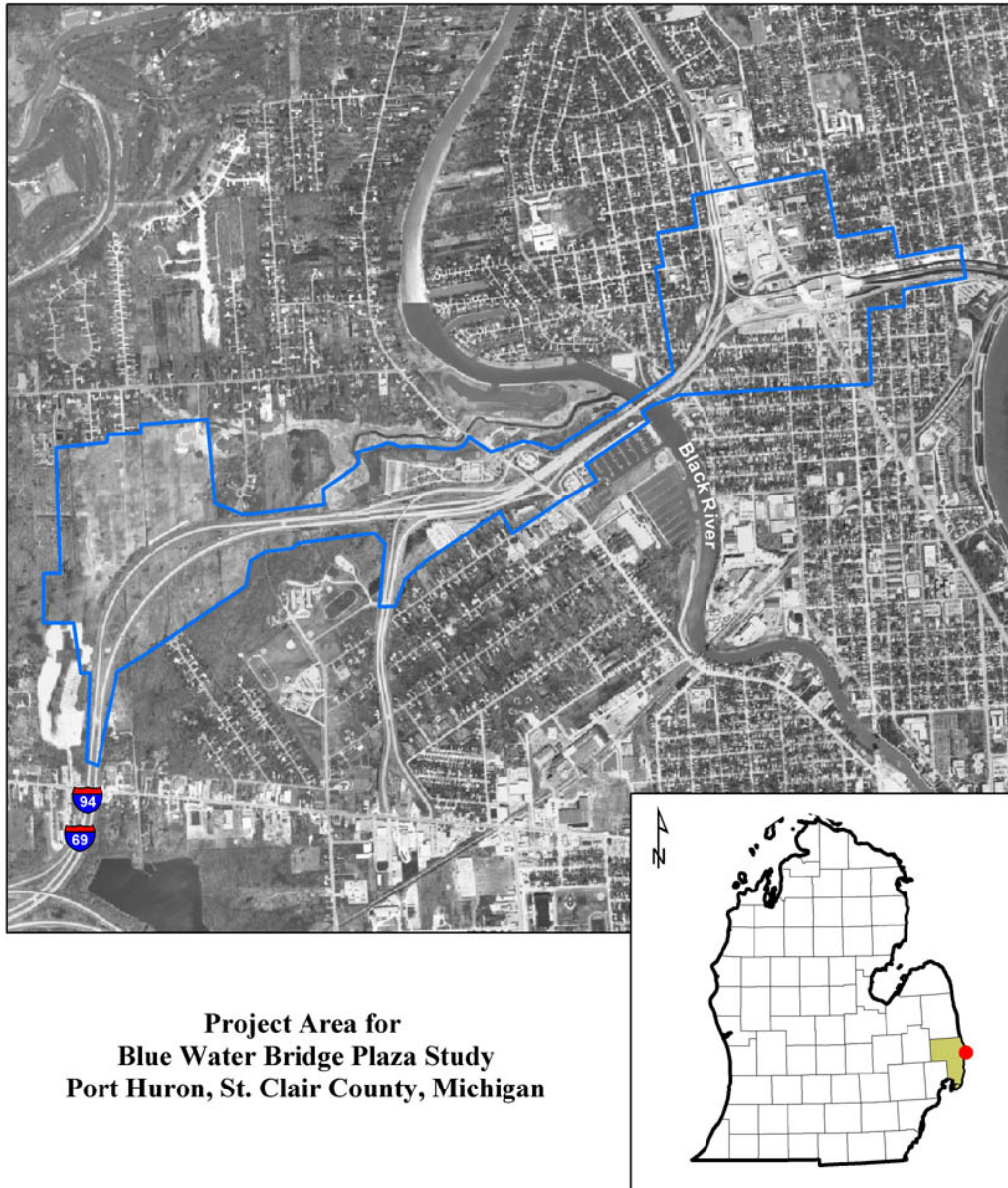
## **FIGURES**


## **ATTACHMENT A-1**

Figure 1.1

Project Area for Blue Water Bridge Plaza Study, Port Huron, St. Clair County, Michigan  
County, Michigan





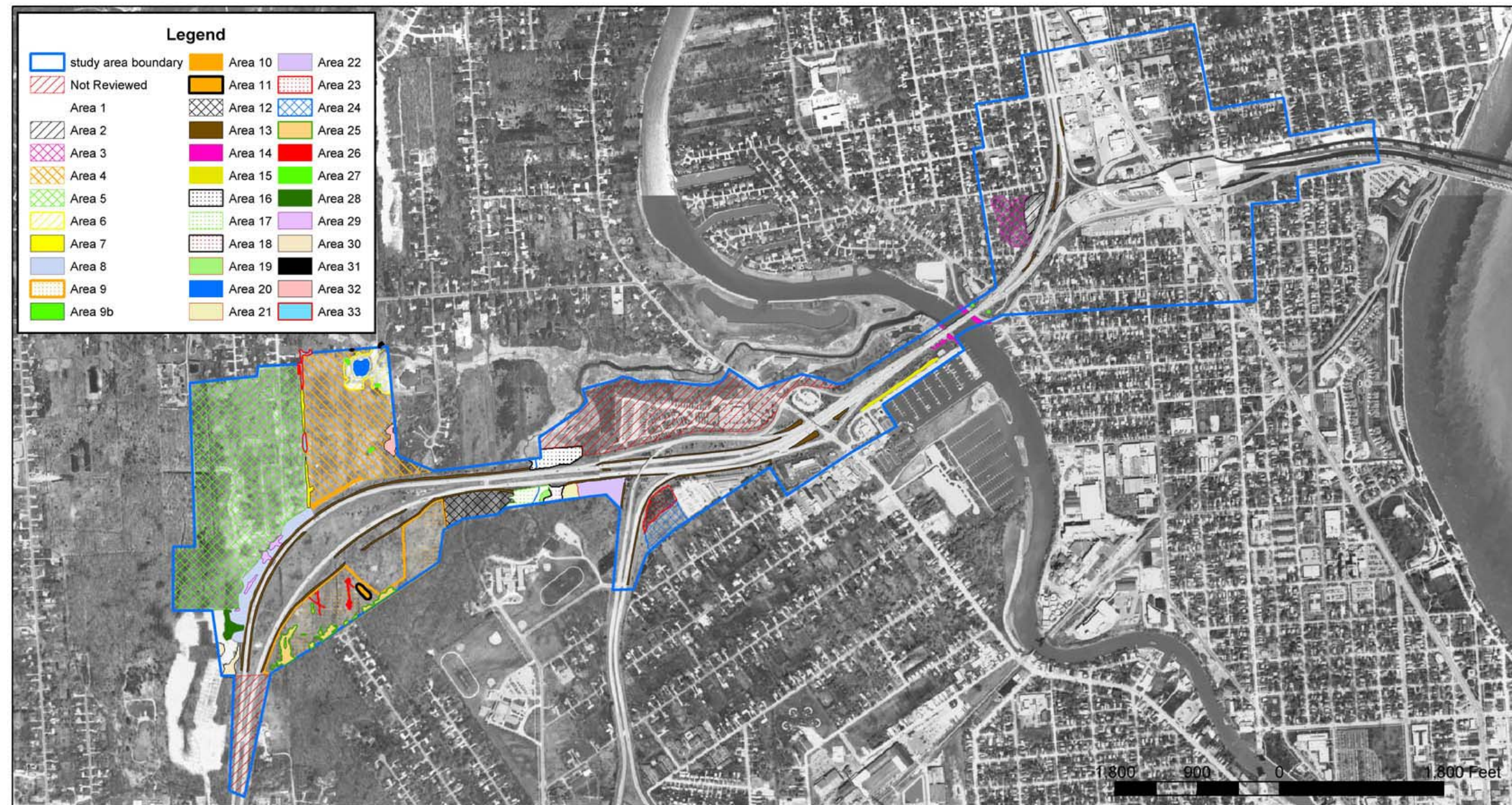
	<b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917	<b>Wibur Smith Associates</b>  <b>Blue Water Bridge Plaza Study</b>	AJS 06/15/04	FIGURE NO. <b>1.1</b>
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## **ATTACHMENT A-2**


Figures 3.1-3.4

Location of Habitat Types Identified and Assessed Within the Study Area.



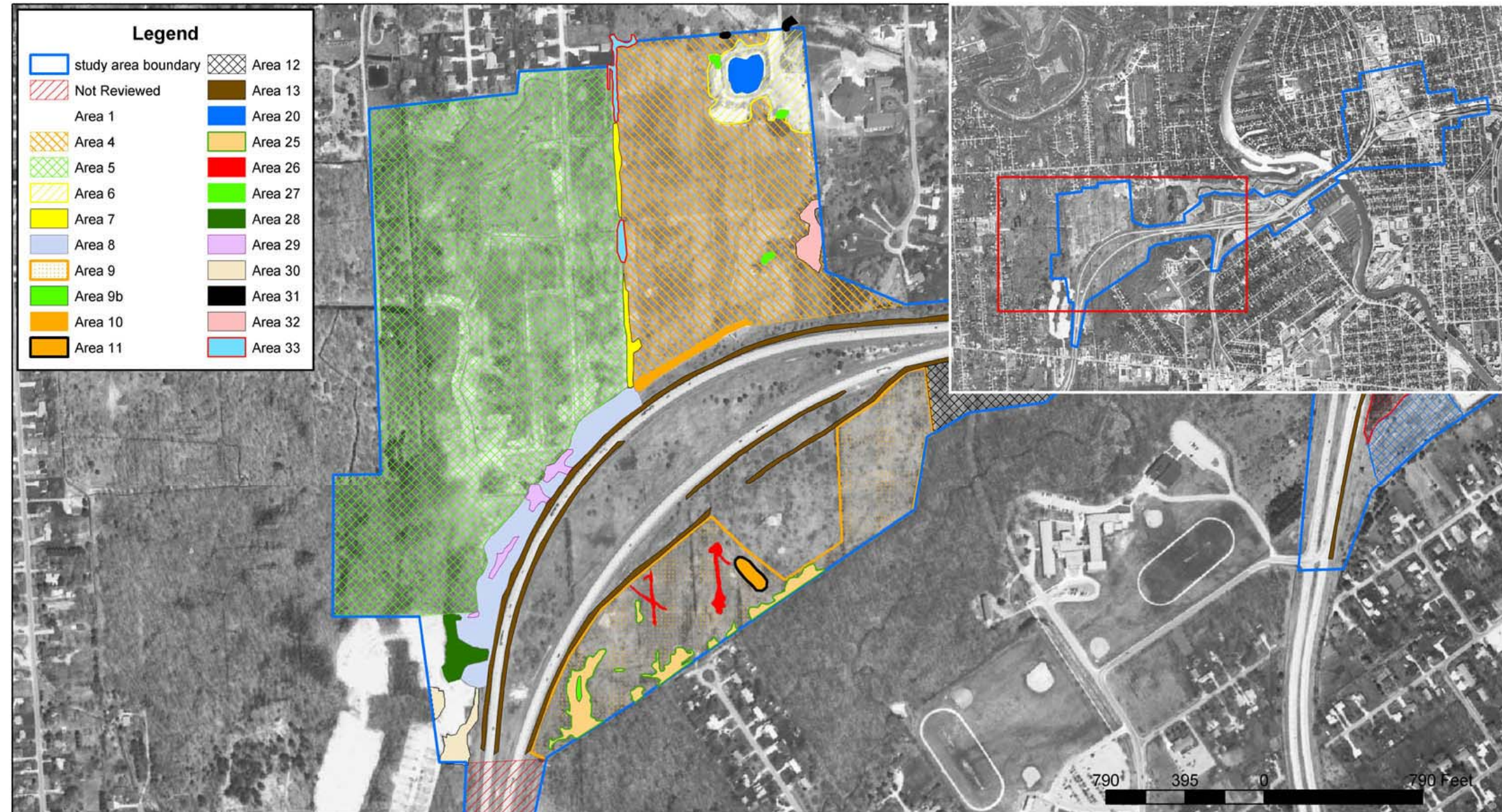


Location of Habitat Types Assessed within Study Area.


 <b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917	<b>Wilbur Smith Associates</b>		AJS	FIGURE NO.
	<b>Blue Water Bridge Plaza Study</b>		07/01/04	<b>3.1</b>





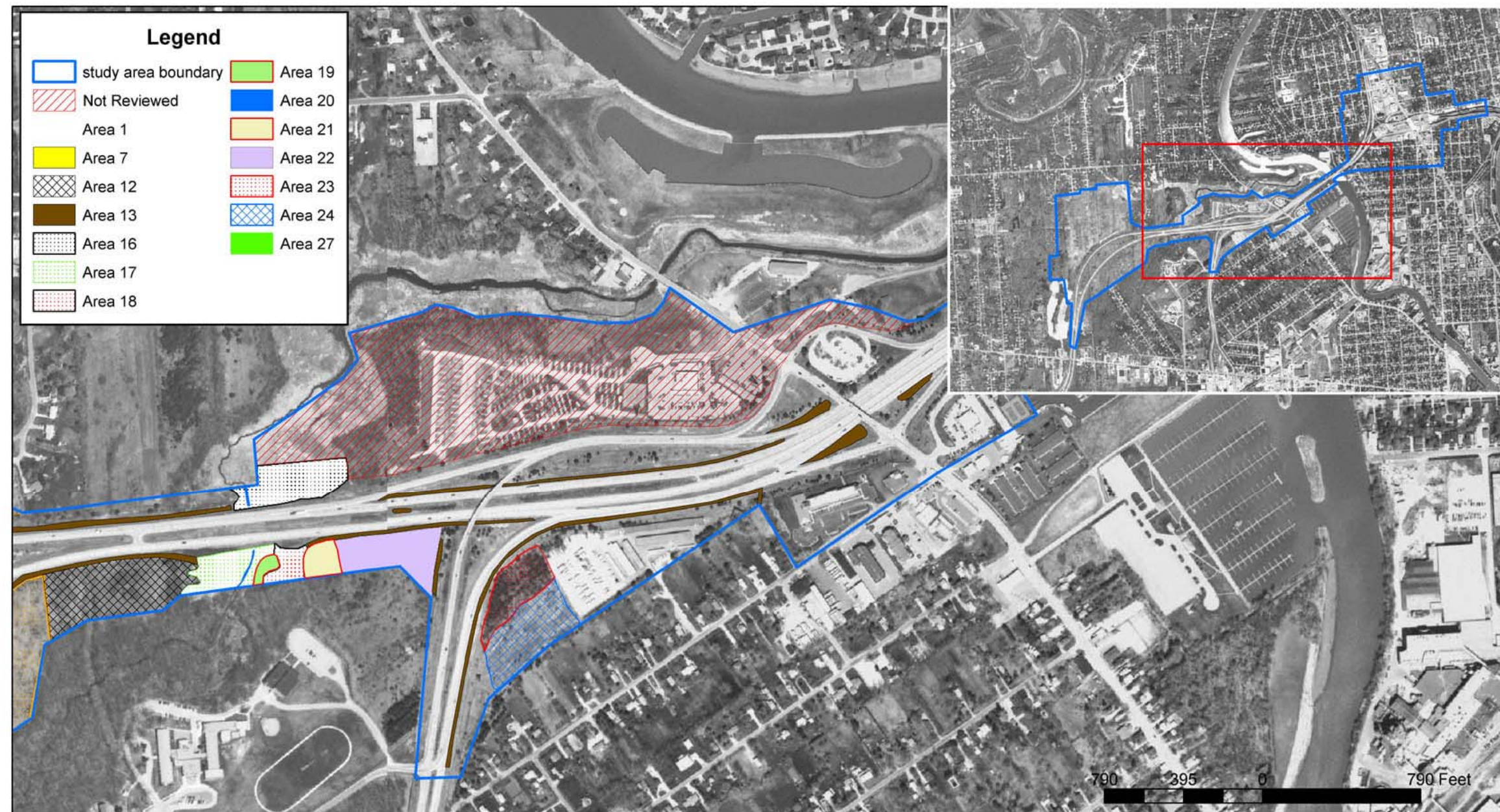


Location of Habitat Types Assessed within the Western 1/3 of the Study Area.


 <b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917	<b>Wilbur Smith Associates</b>		AJS	FIGURE NO.
	<b>Blue Water Bridge Plaza Study</b>		07/01/04	<b>3.2</b>

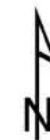






Location of Habitat Types Assessed within the Central 1/3 of the Study Area.


 <b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917	<b>Wilbur Smith Associates</b>		AJS	FIGURE NO.
	<b>Blue Water Bridge Plaza Study</b>		07/01/04	<b>3.3</b>







Location of Habitat Types Assessed within the Eastern 1/3 of the Study Area.

 <p><b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917</p>	<b>Wilbur Smith Associates</b>		AJS	FIGURE NO.
	<b>Blue Water Bridge Plaza Study</b>		07/01/04	<b>3.4</b>



## **ATTACHMENT A-3**


Figure 3.5

Location of Potential Spotted Turtle Habitat Within Areas 16, 17, and 18.





Location of Potential Spotted Turtle Habitat within Areas 16, 17 and 18.

 <b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917	<b>Wilbur Smith Associates</b>		AJS	FIGURE NO.
	<b>Blue Water Bridge Plaza Study</b>		07/01/04	<b>3.5</b>

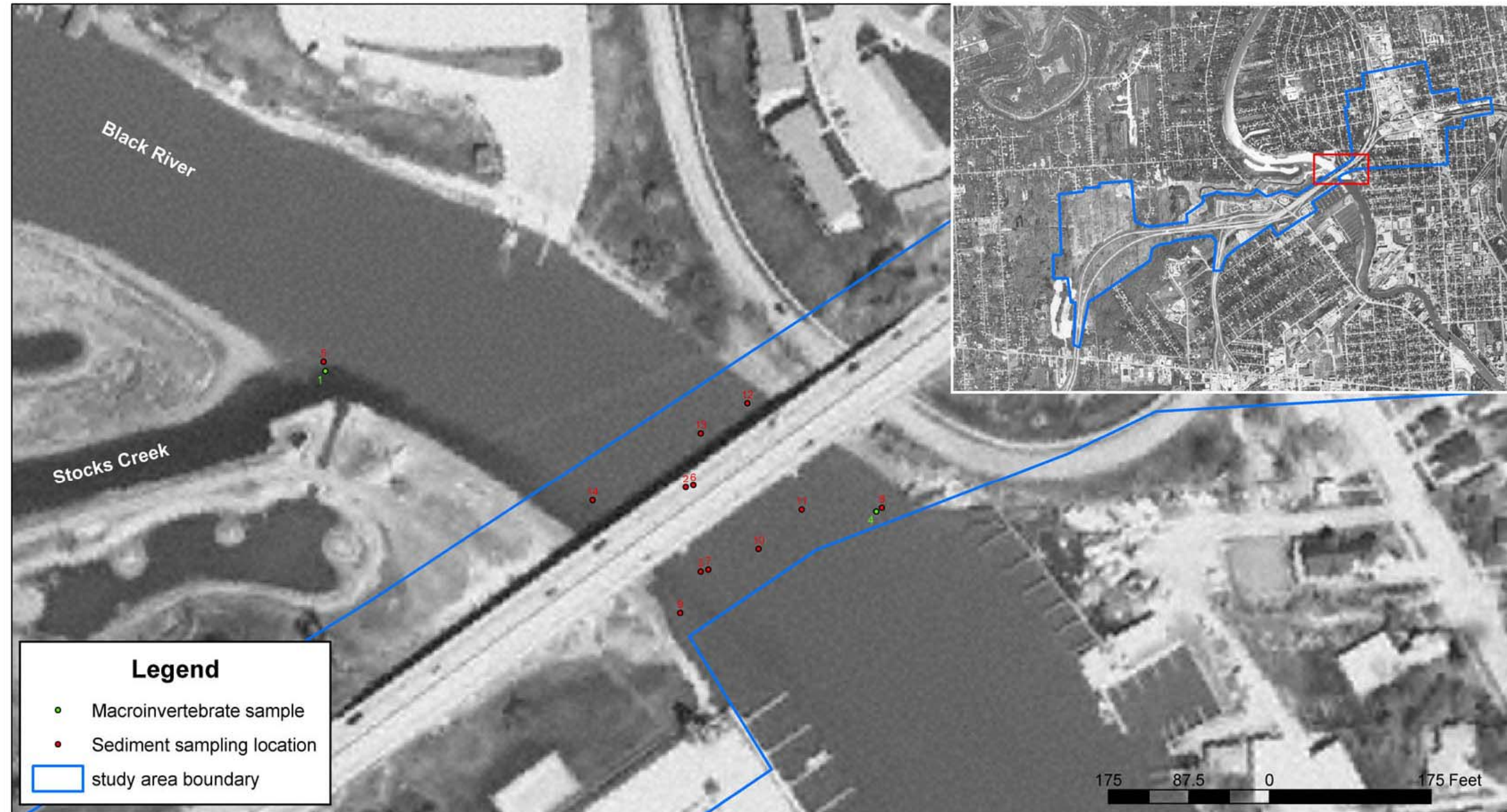





## **ATTACHMENT A-4**

Figure 3.6

Location of Black River Round Hickorynut Mussel Sampling Area



Location of Black River Round Hickorynut Mussel Sampling Area.

 <b>Wetland and Coastal Resources, Inc</b> 5801 W. Michigan Ave. Lansing, MI 48917	<b>Wilbur Smith Associates</b>		AJS	FIGURE NO.
	<b>Blue Water Bridge Plaza Study</b>		07/01/04	<b>3.6</b>



## **APPENDIX B**

### **CORRESPONDENCE**

## **ATTACHMENT B-1**

December 16, 2002 T&E Species Letter from the Michigan Department of Natural  
Resources

RECEIVED  
DEC 20 2002JOHN ENGLER  
GOVERNORSTATE OF MICHIGAN  
DEPARTMENT OF NATURAL RESOURCES  
LANSINGK. L. COOL  
DIRECTOR

December 16, 2002

Mr. Stu Kogge  
Wetland and Coastal Resources  
5801 West Michigan Ave.  
Lansing, MI 48917

Dear Mr. Kogge

The location for which you requested an environmental review was checked against known localities for rare species and unique natural features, which are recorded in a statewide database. This continuously updated database is a comprehensive source of information on Michigan's endangered, threatened and special concern species, exemplary natural communities and other unique natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features at a site. The absence of records may mean that a site has not been surveyed. Records may not always be up-to-date. In some cases, the only way to obtain a definitive statement on the presence of rare species is to have a competent biologist perform a field survey. Projects that are submitted to the Department of Environmental Quality are routinely checked for such features regardless if they are on public or private land.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, ...fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Department of Natural Resources, Wildlife Division. *Responsibility to protect endangered and threatened species is not limited to the list below. Other species may be present that have not been recorded in the database.*

The presence of threatened or endangered species does not preclude activities or development, but may require alterations in the project plan. Special concern species are not protected under endangered species legislation, but recommendations regarding their protection may be provided. Protection of special concern species will help prevent them from declining to the point of being listed as threatened or endangered in the future.

The following is a summary of the results for the project in St. Clair County, T7N R17E sections 33-35 and T6N R17E Sections 4-5.

The following list includes special features that are known to occur on or near the site(s) and may be impacted by the project.

common name	status	scientific name
Spotted turtle	State threatened	<i>Clemmys guttata</i>
Round hickory-nut	State endangered	<i>Obovaria subrotunda</i>

The state threatened **spotted turtle** (*Clemmys guttata*) has been known to occur in the wetlands associated with Stocks Creek, though the record is quite old (1934). Spotted turtles inhabit shallow ponds, wet meadows, tamarack swamps, bogs, fens, marsh channels, sphagnum seepages, and slow streams. Common qualities of occupied habitats include clear, shallow water with a mud or muck bottom and ample aquatic and emergent vegetation. Spotted turtles often wander on land and may turn up in temporary ponds. Spotted turtles are difficult to find in summer, due to reduced movement and lack of basking activity. When frightened while in or adjacent to water, they will dive to the bottom and bury themselves



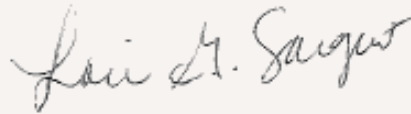
the mud or beneath vegetation. They typically hibernate in shallow water from mid-October to late March.

Spotted turtles are omnivorous, but with a decided preference for animal food. June is the primary month females leave their drying pools to nest. They will seek a sunny, open spot with sandy or loamy soil that is moist but well drained to lay eggs. If such places are scarce, they may nest in grassy sites or in the tops of grass or sedge hummocks. Most spotted turtle hatchlings emerge from the nest in August or September. These hatchlings will reach maturity in 8-10 years. Protection of upland nesting habitat adjacent to identified and active core wetland habitats is required for the continued survival of this species.

The state endangered **round hickory-nut mussel** (*Obovaria subrotunda*) has been known to inhabit the Black River, though the record is quite old (1930). This mussel inhabits medium-sized streams in sand and gravel in areas with moderate flow.

Thank you for your advance coordination in addressing the protection of Michigan's natural resource heritage. If you have further questions, please call me at 517-373-1263.

Sincerely,



Lori G. Sargent  
Endangered Species Specialist  
Wildlife Division

LGS:kpg

## **APPENDIX C**

### LIST OF TABLES

## ATTACHMENT C-1

Table 2.1

St. Clair County Element List



**Table 2.1 St. Clair County Element List**

Current as of 5-7-2004

Scientific Name	Common Name	Federal Status	State Status*
<i>Acipenser fulvescens</i>	Lake Sturgeon		T
<i>Agalinis gattereri</i>	Gatterer's Gerardia		E
<i>Agalinis skinneriana</i>	Skinner's Gerardia		E
<i>Alasmodonta marginata</i>	Elktoe		SC
<i>Alasmodonta viridis</i>	Slippershell Mussel		SC
<i>Ammocrypta pellucida</i>	Eastern Sand Darter		T
<i>Ammodramus henslowii</i>	Henslow's Sparrow		T
<i>Aristida longespica</i>	Three-awned Grass		T
<i>Asclepias purpurascens</i>	Purple Milkweed		SC
<i>Asclepias sullivantii</i>	Sullivant's Milkweed		T
<i>Baptisia lactea</i>	White or Prairie False Indigo		SC
<i>Beckmannia syzigachne</i>	Slough Grass		T
<i>Botaurus lentiginosus</i>	American Bittern		SC
<i>Callitriche heterophylla</i>	Large Water-starwort		T
<i>Carex festucacea</i>	Fescue Sedge		SC
<i>Carex platyphylla</i>	Broad-leaved Sedge		T
<i>Castanea dentata</i>	American Chestnut		E
<i>Chlidonias niger</i>	Black Tern		SC
<i>Cirsium hillii</i>	Hill's Thistle		SC
<i>Clemmys guttata</i>	Spotted Turtle		T
<i>Cuscuta indecora</i>	Dodder		SC
<i>Cypripedium candidum</i>	White Lady-slipper		T
<i>Dalea purpurea</i>	Purple Prairie-clover		X
Delta	Geographical Feature		
<i>Dendroica cerulea</i>	Cerulean Warbler		SC
<i>Dentaria maxima</i>	Large Toothwort		T
<i>Diarrhena americana</i>	Beak Grass		T
<i>Draba reptans</i>	Creeping Whitlow-grass		T
<i>Elaphe vulpina gloydi</i>	Eastern Fox Snake		T
<i>Epioblasma triquetra</i>	Snuffbox		E
<i>Euonymus atropurpurea</i>	Wahoo		SC
<i>Fimbristylis puberula</i>	Chestnut Sedge		X
<i>Flexamia delongi</i>	Leafhopper		SC
<i>Flexamia reflexus</i>	Leafhopper		SC
<i>Galearis spectabilis</i>	Showy Orchis		T
<i>Gallinula chloropus</i>	Common Moorhen	PS	SC
<i>Gentiana flavida</i>	White Gentian		E
<i>Gentianella quinquefolia</i>	Stiff Gentian		T
Great blue heron rookery	Great Blue Heron Rookery		
Great lakes marsh			
<i>Gymnocarpium robertianum</i>	Limestone Oak Fern		T
<i>Haliaeetus leucocephalus</i>	Bald Eagle	PS:LT,PDL	T
<i>Hemicarpha micrantha</i>	Dwarf-bulrush		SC
<i>Hiodon tergisus</i>	Mooneye		T
<i>Hydrastis canadensis</i>	Goldenseal		T

Scientific Name	Common Name	Federal Status	State Status*
<i>Hypericum gentianoides</i>	Gentian-leaved St. John's-wort		SC
<i>Ixobrychus exilis</i>	Least Bittern		T
<i>Jeffersonia diphylla</i>	Twingleaf		SC
<i>Juncus brachycarpus</i>	Short-fruited Rush		T
Lakeplain oak openings			
Lakeplain wet prairie	Alkaline Wet Prairie, Midwest Type		
Lakeplain wet-mesic prairie	Alkaline Tallgrass Prairie, Midwest Type		
<i>Lampsilis fasciola</i>	Wavy-rayed Lampmussel		T
<i>Lithospermum incisum</i>	Narrow-leaved Puccoon		X
<i>Lithospermum latifolium</i>	Broad-leaved Puccoon		SC
<i>Ludwigia alternifolia</i>	Seedbox		SC
<i>Lycopodiella subappressa</i>	Northern Appressed Clubmoss		SC
<i>Macrhybopsis storeriana</i>	Silver Chub		SC
Mesic northern forest			
<i>Monarda didyma</i>	Oswego Tea		X
<i>Moxostoma carinatum</i>	River Redhorse		T
<i>Notropis anogenus</i>	Pugnose Shiner		SC
<i>Noturus miurus</i>	Brindled Madtom		SC
<i>Noturus stigmosus</i>	Northern Madtom		E
<i>Obovaria subrotunda</i>	Round Hickorynut		E
<i>Panax quinquefolius</i>	Ginseng		T
<i>Panicum leibergii</i>	Leiberg's Panic-grass		T
<i>Papaipema beeriana</i>	Blazing Star Borer		SC
<i>Papaipema sciata</i>	Culvers Root Borer		SC
<i>Penstemon calycosus</i>	Smooth Beard Tongue		T
<i>Percina copelandi</i>	Channel Darter		E
<i>Plantago cordata</i>	Heart-leaved Plantain		E
<i>Platanthera ciliaris</i>	Orange or Yellow Fringed Orchid		T
<i>Platanthera leucophaea</i>	Prairie Fringed Orchid		E
<i>Pleurobema coccineum</i>	Round Pigtoe		SC
<i>Poa paludigena</i>	Bog Bluegrass		T
<i>Polygala cruciata</i>	Cross-leaved Milkwort		SC
<i>Polygala incarnata</i>	Pink Milkwort		X
<i>Polygonatum biflorum</i> var. <i>melleum</i>	Honey-flowered Solomon-seal		X
<i>Polygonum careyi</i>	Carey's Smartweed		T
<i>Prosapia ignipectus</i>	Red-legged Spittlebug		SC
<i>Pterospora andromedea</i>	Pine-drops		T
<i>Rallus elegans</i>	King Rail		E
<i>Ranunculus ambigens</i>	Spearwort		T
<i>Ranunculus rhomboideus</i>	Prairie Buttercup		T
<i>Scirpus clintonii</i>	Clinton's Bulrush		SC

Scientific Name	Common Name	Federal Status	State Status*
<i>Scleria pauciflora</i>	Few-flowered Nut-rush		E
<i>Scleria triglomerata</i>	Tall Nut-rush		SC
<i>Seiurus motacilla</i>	Louisiana Waterthrush		SC
<i>Simpsonia ambigua</i>	Salamander Mussel		E
<i>Solidago bicolor</i>	White Goldenrod		SC
Southern swamp			
<i>Sterna forsteri</i>	Forster's Tern		SC
<i>Sterna hirundo</i>	Common Tern		T
<i>Stizostedion canadense</i>	Sauger		T
<i>Trillium undulatum</i>	Painted Trillium		E
<i>Triplasis purpurea</i>	Sand Grass		SC
<i>Villosa fabalis</i>	Rayed Bean		E
<i>Villosa iris</i>	Rainbow		SC
<i>Vitis vulpina</i>	Frost Grape		T
<i>Wilsonia citrina</i>	Hooded Warbler		SC

\*T = Threatened; E = Endangered; Sc = Special Concern; X = Extirpated

Source: Michigan Natural Features Inventory

## ATTACHMENT C-2

Table 2.2

Target Species and Optimum Survey Times for  
Target T & E Species for Blue Water Bridge Plaza Study

**Table 2.2 Target Species and Optimum Survey Times for Target T & E Species for Blue Water Bridge Plaza Study**

Target Species	Optimal Time Periods for Assessment						
	March	April	May	June	July	August	September
Spotted turtle ( <i>Clemmys guttata</i> ) State Threatened							
Round hickory-nut mussel ( <i>Obovaria subrotunda</i> ) State Endangered							

## ATTACHMENT C-3

Table 3.1

WCR Survey Times

Table 3.1 WCR Survey Times

DATE	2003				2004						
	Sept.	Oct.	Nov.	Dec	Jan	Feb	Mar	Apr	May	June	July
1											
2											
3											
4											
5								X and Spotted Turtle			
6											
7											
8			X								
9											Round Hickorynut
10											
11										Spotted Turtle	
12											
13						X					
14											
15											
16	X					X					
17	X										
18	X									Spotted Turtle	
19											
20											
21										X	
22											
23											
24	X										
25	X										
26											
27											
28											
29	X										
30											
31											

X indicates general review for listed species and species on element list

## **ATTACHMENT C-4**

Table 3.2

Species Lists for T & E Habitat Areas



Table 3.2 Species Lists for T &amp; E Habitat Areas

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 1	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>Acer saccharinum</i>	SILVER MAPLE	2	FACW	Nt Tree
	<i>Acer saccharum</i>	SUGAR MAPLE	5	FACU	Nt Tree
	<i>Achillea millefolium</i>	YARROW	1	FACU	Nt P-Forb
	<i>AILANTHUS ALTISSIMA</i>	TREE OF HEAVEN	0	UPL	Ad Tree
	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>Asclepias sullivantii</i>	SULLIVANT'S MILKWEED	9	UPL	Nt P-Forb
	<i>Betula papyrifera</i>	PAPER BIRCH	2	FACU+	NtTree
	<i>Bidens vulgatus</i>	TALL BEGGAR TICKS	0	FACW	Nt A-Forb
	<i>CATALPA SPECIOSA</i>	NORTHERN CATALPA	0	FACU	Ad Tree
	<i>CICHORIUM INTYBUS</i>	CHICORY	0	UPL	Ad P-Forb
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>Festuca spp.</i>	FESCUE SPP.			
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>HEMEROCALLIS FULVA</i>	ORANGE DAY LILY	0	UPL	Ad P-Forb
	<i>LINARIA SPARTEA</i>	BUTTER AND EGGS	0	UPL	Ad A-Forb
	<i>PHLEUM PRATENSE</i>	TIMOTHY	0	FACU	Ad P-Grass
	<i>Picea spp.</i>	SPRUCE SPP.			
	<i>PLANTAGO MAJOR</i>	COMMON PLANTAIN	0	FAC+	Ad P-Forb
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Poa spp.</i>	GRASS SPP.			
	<i>Quercus palustris</i>	PIN OAK	8	FACW	Nt Tree
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>Thuja occidentalis</i>	ARBOR VITAE	4	FACW	Nt Tree
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>VERBASCUM THAPSUS</i>	COMMON MULLEIN	0	UPL	Ad B-Forb
	<i>Vitis aestivalis</i>	SUMMER GRAPE	6	FACU	Nt W-Vine
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 2	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>ARCTIUM MINUS</i>	COMMON BURDOCK	0	UPL	Ad B-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>CICHORIUM INTYBUS</i>	CHICORY	0	UPL	Ad P-Forb
	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>CIRSIIUM VULGARE</i>	BULL THISTLE	4	FACU-	Ad B-Forb
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>DIPSACUS FULLONUM</i>	COMMON TEASEL	0	UPL	Ad P-Forb
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Helianthus spp.</i>	SUNFLOWER SPP.			
	<i>HYPERICUM PERFORATUM</i>	COMMON ST. JOHN'S WORT	0	UPL	Ad P-Forb
	<i>MELILOTUS ALBA</i>	WHITE SWEET CLOVER	0	FACU	Ad B-Forb
	<i>Parthenocissus quinquefolia</i>	VIRGINIA CREEPER	5	FAC-	Nt W-Vine
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>PHLEUM PRATENSE</i>	TIMOTHY	0	FACU	Ad P-Grass
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Polygonum scandens</i>	FALSE BUCKWHEAT	2	FAC	Nt P-Forb
	<i>Polygonum virginianum</i>	JUMPSEED	4	FAC	Nt P-Forb
	<i>Rhus typhina</i>	STAGHORN SUMAC	2	UPL	Nt Tree
	<i>Rubus allegheniensis</i>	COMMON BLACKBERRY	1	FACU+	Nt Shrub
	<i>Rubus occidentalis</i>	BLACK RASPBERRY	1	UPL	Nt Shrub
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>Rumex orbiculatus</i>	GREAT WATER DOCK	9	OBL	Nt P-Forb
	<i>SAPONARIA OFFICINALIS</i>	BOUNCING BET	0	FACU	Ad P-Forb
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago speciosa</i>	SHOWY GOLDENROD	5	UPL	Nt P-Forb
	<i>SONCHUS OLERACEUS</i>	COMMON SOW THISTLE	0	FACU	Ad A-Forb
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>Vitis aestivalis</i>	SUMMER GRAPE	6	FACU	Nt W-Vine
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 3	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>Circaea lutetiana</i>	ENCHANTER'S NIGHTSHADE	2	FACU	Nt P-Forb
	<i>Crataegus spp.</i>	HAWTHORN SPP.			
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>LEONURUS CARDIACA</i>	MOTHERWORT	0	UPL	Ad P-Forb
	<i>LONICERA XBELLA</i>	HYBRID HONEYSUCKLE	0	FACU	Ad Shrub
	<i>Lonicera spp.</i>	HONEYSUCKLE SPP.			
	<i>NEPETA CATARIA</i>	CATNIP	0	FAC-	Ad P-Forb
	<i>Oxalis stricta</i>	COMMON YELLOW WOOD SORREL	0	FACU	Nt P-Forb
	<i>Parthenocissus quinquefolia</i>	VIRGINIA CREEPER	5	FAC-	Nt W-Vine
	<i>Prunus serotina</i>	WILD BLACK CHERRY	2	FACU	Nt Tree
	<i>Prunus virginiana</i>	CHOKE CHERRY	2	FAC-	Nt Shrub
	<i>Quercus palustris</i>	PIN OAK	8	FACW	Nt Tree
	<i>Quercus rubra</i>	RED OAK	5	FACU	Nt Tree
	<i>Rhus typhina</i>	STAGHORN SUMAC	2	UPL	Nt Tree
	<i>Rubus occidentalis</i>	BLACK RASPBERRY	1	UPL	Nt Shrub
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>VIBURNUM OPULUS</i>	EUROPEAN Highbush CRANBERRY	0	FAC	Ad Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 4	<i>Aster pilosus</i>	HAIRY ASTER	1	FACU+	Nt P-Forb
	<i>BROMUS INERMIS</i>	SMOOTH BROME	0	UPL	Ad P-Grass
	<i>CHRYSANTHEMUM LEUCANTHEMUM</i>	OX EYE DAISY	0	UPL	Ad P-Forb
	<i>CIRSIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>CIRSIUM VULGARE</i>	BULL THISTLE	0	FACU-	Ad B-Forb
	<i>Clinopodium vulgare</i>	WILD BASIL	3	UPL	Nt P-Forb
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 4, cont.	<i>MELILOTUS ALBA</i>	WHITE SWEET CLOVER	0	FACU	Ad B-Forb
	<i>PHLEUM PRATENSE</i>	TIMOTHY	0	FACU	Ad P-Grass
	<i>POLYGONUM PERSICARIA</i>	LADY'S THUMB	0	FACW	Ad A-Forb
	<i>Potentilla simplex</i>	OLD FIELD CINQUEFOIL	2	FACU-	Nt P-Forb
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
Area 5	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>CHENOPODIUM ALBUM</i>	LAMB'S QUARTERS	0	FAC-	Ad A-Forb
	<i>CHRYSANTHEMUM</i> <i>LEUCANTHEMUM</i>	OX EYE DAISY	0	UPL	Ad P-Forb
	<i>CIRSIUM VULGARE</i>	BULL THISTLE	0	FACU-	Ad B-Forb
	<i>Monarda fistulosa</i>	WILD BERGAMOT	2	FACU	Nt P-Forb
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>VIBURNUM OPULUS</i>	EUROPEAN Highbush CRANBERRY	0	FAC	Ad Shrub
Area 6	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>CIRSIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>PHLEUM PRATENSE</i>	TIMOTHY	0	FACU	Ad P-Grass
	<i>Plantago rugelii</i>	RED STALKED PLANTAIN	0	FAC	Nt A-Forb
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Salix exigua</i>	SANDBAR WILLOW	1	OBL	Nt Shrub
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 6 cont.	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
Area 7	<i>Aster pilosus</i>	HAIRY ASTER	1	FACU+	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Crataegus spp.</i>	HAWTHORN SPP.			
	<i>MALUS PUMILA</i>	APPLE	0	UPL	Ad Tree
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>RHAMNUS CATHARTICA</i>	COMMON BUCKTHORN	0	FACU	Ad Tree
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>VERBASCUM DENSIFLORUM</i>	MULLEIN	0	UPL	Ad B-Forb
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 8	<i>Acer rubrum</i>	RED MAPLE	1	FAC	Nt Tree
	<i>Aster ericoides</i>	HEATH ASTER	3	FACU-	Nt P-Forb
	<i>Aster pilosus</i>	HAIRY ASTER	1	FACU+	Nt P-Forb
	<i>BERBERIS VULGARIS</i>	COMMON BARBERRY	0	FACU	Ad Shrub
	<i>Betula papyrifera</i>	PAPER BIRCH	2	FACU+	Nt Tree
	<i>Carex blanda</i>	SEDGE	1	FAC	Nt P-Sedge
	<i>Carpinus caroliniana</i>	BLUE BEECH	6	FAC	Nt Tree
	<i>CELASTRUS ORBICULATA</i>	ORIENTAL BITTERSWEET	0	UPL	Ad W-Vine
	<i>Circaea lutetiana</i>	ENCHANTER'S NIGHTSHADE	2	FACU	Nt P-Forb
	<i>Erechtites hieracifolia</i>	FIREWEED	2	FACU	Nt A-Forb
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Geranium maculatum</i>	WILD GERANIUM	4	FACU	NT P-Forb
	<i>Hamamelis virginiana</i>	WITCH HAZEL	5	FACU	Nt Shrub
	<i>Lysimachia ciliata</i>	FRINGED LOOSESTRIFE	4	FACW	Nt P-Forb
	<i>Mitchella repens</i>	PARTRIDGE BERRY	5	FACU+	Nt P-Forb
	<i>Parthenocissus quinquefo</i>	VIRGINIA CREEPER	5	FAC-	Nt W-Vine
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Prenanthes alba</i>	WHITE LETTUCE	5	FACU	Nt P-Forb
	<i>Prunus serotina</i>	WILD BLACK CHERRY	2	FACU	Nt Tree
	<i>Prunus virginiana</i>	CHOKE CHERRY	2	FAC-	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 8 cont.	<i>Quercus rubra</i>	RED OAK	5	FACU	Nt Tree
	<i>Rubus occidentalis</i>	BLACK RASPBERRY	1	UPL	Nt Shrub
	<i>Sassafras albidum</i>	SASSAFRAS	5	FACU	Nt Tree
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	NT Tree
	<i>VERBASCUM THAPSUS</i>	COMMON MULLEIN	0	UPL	Ad B-Forb
	<i>VIBURNUM OPULUS</i>	EUROPEAN Highbush CRANBERRY	0	FAC	Ad Shrub
Area 9	<i>Achillea millefolium</i>	YARROW	1	FACU	Nt P-Forb
	<i>Agrimonia gryposepala</i>	TALL AGRIMONY	2	FACU+	Nt P-Forb
	<i>AGROPYRON REPENS</i>	QUACK GRASS	0	FACU	Ad P-Grass
	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>Aster pilosus</i>	HAIRY ASTER	1	FACU+	Nt P-Forb
	<i>BROMUS INERMIS</i>	SMOOTH BROME	0	UPL	Ad P-Grass
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>CHRYSANTHEMUM LEUCANTHEMUM</i>	OX EYE DAISY	0	UPL	Ad P-Forb
	<i>CIRSIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>CIRSIUM VULGARE</i>	BULL THISTLE	0	FACU-	Ad B-Forb
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>DIPSACUS LACINIATUS</i>	CUT LEAVED TEASEL	0	UPL	Ad B-Forb
	<i>ELAEAGNUS UMBELLATA</i>	AUTUMN OLIVE	0	FACU	Ad Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fragaria virginiana</i>	WILD STRAWBERRY	2	FAC-	Nt P-Forb
	<i>Geum canadense</i>	WHITE AVENS	1	FAC	Nt P-Forb
	<i>Geum laciniatum</i>	ROUGH AVENS	2	FACW	Nt P-Forb
	<i>LONICERA TATARICA</i>	SMOOTH TARTARIAN HONEYSUCKLE	0	FACU	Ad Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 9 cont.	<i>Parthenocissus quinquef</i>	VIRGINIA CREEPER	5	FAC-	Nt W-Vine
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>PHLEUM PRATENSE</i>	TIMOTHY	0	FACU	Ad P-Grass
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Quercus rubra</i>	RED OAK	5	FACU	Nt Tree
	<i>ROSA MULTIFLORA</i>	MULTIFLORA ROSE	0	FACU	Ad Shrub
	<i>Rubus allegheniensis</i>	COMMON BLACKBERRY	1	FACU+	Nt Shrub
	<i>Rubus occidentalis</i>	BLACK RASPBERRY	1	UPL	Nt Shrub
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>VERBASCUM THAPSUS</i>	COMMON MULLEIN	0	UPL	Ad B-Forb
	<i>Zanthoxylum americanum</i>	PRICKLY ASH	3	UPL	Nt Shrub
Area 10	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>VERBASCUM THAPSUS</i>	COMMON MULLEIN	0	UPL	Ad B-Forb
	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
Area 11	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>VERBASCUM THAPSUS</i>	COMMON MULLEIN	0	UPL	Ad B-Forb
Area 12	<i>Achillea millefolium</i>	YARROW	1	FACU	Nt P-Forb
	<i>AGROPYRON REPENS</i>	QUACK GRASS	0	FACU	Ad P-Grass
	<i>AGROSTIS GIGANTEA</i>	REDTOP	0	FAC	Ad P-Grass
	<i>Anemone canadensis</i>	CANADA ANEMONE	4	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 12 cont.	<i>BROMUS INERMIS</i>	SMOOTH BROME	0	UPL	Ad P-Grass
	<i>CHRYSANTHEMUM</i> <i>LEUCANTHEMUM</i>	OX EYE DAISY	0	UPL	Ad P-Forb
	<i>CIRSIIUM VULGARE</i>	BULL THISTLE	0	FACU-	Ad B-Forb
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>DACTYLIS GLOMERATA</i>	ORCHARD GRASS	0	FACU	Ad P-Grass
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>ELAEAGNUS UMBELLATA</i>	AUTUMN OLIVE	0	FACU	Ad Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fragaria virginiana</i>	WILD STRAWBERRY	2	FAC-	Nt P-Forb
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Geum canadense</i>	WHITE AVENS	1	FAC	Nt P-Forb
	<i>HIERACIUM AURANTIACUM</i>	ORANGE HAWKWEED	0	UPL	Ad P-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb
	<i>Monarda fistulosa</i>	WILD BERGAMOT	2	FACU	Nt P-Forb
	<i>Parthenocissus quinquefolia</i>	VIRGINIA CREEPER	5	FAC-	Nt W-Vine
	<i>PHLEUM PRATENSE</i>	TIMOTHY	0	FACU	Ad P-Grass
	<i>Pinus strobus</i>	WHITE PINE	3	FACU	Nt Tree
	<i>PLANTAGO LANCEOLATA</i>	ENGLISH PLANTAIN	0	FAC	Ad P-Forb
	<i>Plantago rugelii</i>	RED STALKED PLANTAIN	0	FAC	Nt A-Forb
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Potentilla simplex</i>	OLD FIELD CINQUEFOIL	2	FACU-	Nt P-Forb
	<i>Prunus virginiana</i>	CHOKE CHERRY	2	FAC-	Nt Shrub
	<i>Pteridium aquilinum</i>	BRACKEN FERN	0	FACU	Nt Fern
	<i>RHAMNUS CATHARTICA</i>	COMMON BUCKTHORN	0	FACU	Ad Tree
	<i>Rhus typhina</i>	STAGHORN SUMAC	2	UPL	Nt Tree
	<i>Ribes cynosbati</i>	PRICKLY or WILD GOOSEBERRY	4	UPL	Nt Shrub
	<i>Rubus allegheniensis</i>	COMMON BLACKBERRY	1	FACU+	Nt Shrub
	<i>Rubus occidentalis</i>	BLACK RASPBERRY	1	UPL	Nt Shrub
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Sassafras albidum</i>	SASSAFRAS	5	FACU	Nt Tree



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 12 cont.	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Solidago speciosa</i>	SHOWY GOLDENROD	5	UPL	Nt P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>TRIFOLIUM HYBRIDUM</i>	ALSIKE CLOVER	0	FAC-	Ad P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 13					
Wetland Complexes 17-21, 35, 37-43, 50-53,55	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Bidens cernuus</i>	NODDING BUR MARIGOLD	3	OBL	Nt A-Forb
	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb
	<i>Juncus torreyi</i>	TORREY'S RUSH	4	FACW	Nt P-Forb
	<i>LINARIA SPARTEA</i>	BUTTER AND EGGS	0	UPL	Ad A-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>NEPETA CATARIA</i>	CATNIP	0	FAC-	Ad P-Forb
	<i>Panicum capillare</i>	WITCH GRASS	1	FAC	Nt A-Grass
	<i>Parthenocissus quinquefolia</i>	VIRGINIA CREEPER	5	FAC-	Nt W-Vine
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>POLYGONUM PERSICARIA</i>	LADY'S THUMB	0	FACW	Ad A-Forb
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 13 cont.	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Schoenoplectus americanus</i>	OLNEY'S BULRUSH	10	OBL	Nt P-Sedge
	<i>Scirpus atrovirens</i>	BULRUSH	3	OBL	Nt P-Sedge
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
	<i>Typha latifolia</i>	BROAD LEAVED CATTAIL	1	OBL	Nt P-Forb
	<i>Verbena hastata</i>	BLUE VERVAIN	4	FACW+	Nt P-Forb
	<i>Viburnum opulus var. americanum</i>	HIGHBUSH CRANBERRY	5	FACW	Nt Shrub
	<i>Vitis aestivalis</i>	SUMMER GRAPE	6	FACU	Nt W-Vine
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 14					
Wetland Complex 45	<i>Apocynum cannabinum</i>	INDIAN HEMP	3	FAC	Nt P-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Bidens frondosus</i>	COMMON BEGGAR TICKS	1	FACW	Nt A-Forb
	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>Potentilla anserina</i>	Silverweed	5	FACW+	Nt P-Forb
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
Wetland Complex 46	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>Cyperus strigosus</i>	LONG SCALED NUT SEDGE	3	FACW	Nt P-Sedge
	<i>Erigeron philadelphicus</i>	MARSH FLEABANE	2	FACW	Nt P-Forb
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
Wetland Complex 46	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 14, cont.					
Wetland Complex 46	<i>PLANTAGO LANCEOLATA</i>	ENGLISH PLANTAIN	0	FAC	Ad P-Forb
	<i>Polygonum lapathifolium</i>	NODDING SMARTWEED	0	FACW+	Nt A-Forb
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Urtica dioica</i>	NETTLE	1	FAC+	Nt P-Forb
Wetland Complex 47	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Bidens frondosus</i>	COMMON BEGGAR TICKS	1	FACW	Nt A-Forb
	<i>Carex stricta</i>	SEDGE	4	OBL	Nt P-Sedge
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>SALIX FRAGILIS</i>	CRACK WILLOW	0	FAC+	Ad Tree
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 15	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>BARBAREA VULGARIS</i>	YELLOW ROCKET	0	FAC	Ad B-Forb
	<i>Carex stricta</i>	SEDGE	4	OBL	Nt P-Sedge
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>NEPETA CATARIA</i>	CATNIP	0	FAC-	Ad P-Forb
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>RHAMNUS FRANGULA</i>	GLOSSY BUCKTHORN	0	FAC+	Ad Shrub
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 15 cont.	<i>SALIX ALBA</i>	WHITE WILLOW	0	FACW	Ad Tree
	<i>SALIX FRAGILIS</i>	CRACK WILLOW	0	FAC+	Ad Tree
	<i>Sambucus canadensis</i>	ELDERBERRY	3	FACW-	Nt Shrub
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
	<i>Viburnum opulus var.</i>	HIGHBUSH CRANBERRY	5	FACW	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 16	<i>Cicuta maculata</i>	WATER HEMLOCK	4	OBL	Nt B-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Typha latifolia</i>	BROAD LEAVED CATTAIL	1	OBL	Nt P-Forb
Area 17	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>Angelica atropurpurea</i>	ANGELICA	6	OBL	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Eupatorium maculatum</i>	JOE PYE WEED	4	OBL	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
Area 18	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 18 cont.	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus stolonifera</i>	RED OSIER DOGWOOD	2	FACW	Nt Shrub
	<i>Onoclea sensibilis</i>	SENSITIVE FERN	2	FACW	Nt Fern
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>Eupatorium maculatum</i>	JOE PYE WEED	4	OBL	Nt P-Forb
	<i>Scirpus cyperinus</i>	WOOL GRASS	5	OBL	Nt P-Sedge
	<i>Carex lacustris</i>	SEDGE	6	OBL	Nt P-Sedge
	<i>Angelica atropurpurea</i>	ANGELICA	6	OBL	Nt P-Forb
	<i>Quercus bicolor</i>	SWAMP WHITE OAK	8	FACW+	Nt Tree
Area 19	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Crataegus spp.</i>	HAWTHORN SPP.			
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>ELAEAGNUS UMBELLATA</i>	AUTUMN OLIVE	0	FACU	Ad Shrub
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>MALUS PUMILA</i>	APPLE	0	UPL	Ad Tree
	<i>Pinus resinosa</i>	RED PINE	6	FACU	Nt Tree
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Populus grandidentata</i>	BIG TOOTHED ASPEN	4	FACU	Nt Tree
	<i>Quercus rubra</i>	RED OAK	5	FACU	Nt Tree
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 20	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Bidens cernuus</i>	NODDING BUR MARIGOLD	3	OBL	Nt A-Forb
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Echinochloa muricata</i>	BARNYARD GRASS	1	OBL	Nt A-Grass

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 20, cont.	<i>Equisetum arvense</i>	COMMON HORSETAIL	0	FAC	Nt F...Ally
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIPE	0	OBL	Ad P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Salix amygdaloides</i>	PEACH LEAVED WILLOW	3	FACW	Nt Tree
	<i>Salix eriocephala</i>	WILLOW	2	FACW	Nt Shrub
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
Area 21	<i>Acer rubrum</i>	RED MAPLE	1	FAC	Nt Tree
	<i>Anemone canadensis</i>	CANADA ANEMONE	4	FACW	Nt P-Forb
	<i>Carex pensylvanica</i>	SEDGE	4	UPL	Nt P-Sedge
	<i>Carpinus caroliniana</i>	BLUE BEECH	6	FAC	Nt Tree
	<i>Circaea lutetiana</i>	ENCHANTER'S NIGHTSHADE	2	FACU	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Geranium maculatum</i>	WILD GERANIUM	4	FACU	Nt P-Forb
	<i>Geum canadense</i>	WHITE AVENS	1	FAC	Nt P-Forb
	<i>Picea glauca</i>	WHITE SPRUCE	3	FACU	Nt Tree
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Potentilla norvegica</i>	ROUGH CINQUEFOIL	0	FAC	Nt A-Forb
	<i>Prunus serotina</i>	WILD BLACK CHERRY	2	FACU	Nt Tree
	<i>Prunus virginiana</i>	CHOKE CHERRY	2	FAC-	Nt Shrub
	<i>Pteridium aquilinum</i>	BRACKEN FERN	0	FACU	Nt Fern
	<i>Quercus palustris</i>	PIN OAK	8	FACW	Nt Tree
	<i>Quercus rubra</i>	RED OAK	5	FACU	Nt Tree
	<i>RHAMNUS CATHARTICA</i>	COMMON BUCKTHORN	0	FACU	Ad Tree
	<i>Rubus occidentalis</i>	BLACK RASPBERRY	1	UPL	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 21, cont.	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Thalictrum dioicum</i>	EARLY MEADOW RUE	6	FACU+	Nt P-Forb
	<i>Tilia americana</i>	BASSWOOD	5	FACU	Nt Tree
	<i>Vaccinium angustifolium</i>	BLUEBERRY	4	FACU	Nt Shrub
	<i>VIBURNUM OPULUS</i>	EUROPEAN Highbush CRANBERRY	0	FAC	Ad Shrub
Area 22	<i>Achillea millefolium</i>	YARROW	1	FACU	Nt P-Forb
	<i>Apocynum cannabinum</i>	INDIAN HEMP	3	FAC	Nt P-Forb
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>CHRYSANTHEMUM</i> <i>LEUCANTHEMUM</i>	OX EYE DAISY	0	UPL	Ad P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>DACTYLIS GLOMERATA</i>	ORCHARD GRASS	0	FACU	Ad P-Grass
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>ELAEAGNUS UMBELLATA</i>	AUTUMN OLIVE	0	FACU	Ad Shrub
	<i>Fragaria virginiana</i>	WILD STRAWBERRY	2	FAC-	Nt P-Forb
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Lycopus americanus</i>	COMMON WATER HOREHOUND	2	OBL	Nt P-Forb
	<i>Monarda fistulosa</i>	WILD BERGAMOT	2	FACU	Nt P-Forb
	<i>Pinus strobus</i>	WHITE PINE	3	FACU	Nt Tree
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Potentilla simplex</i>	OLD FIELD CINQUEFOIL	2	FACU-	Nt P-Forb
	<i>Prunus serotina</i>	WILD BLACK CHERRY	2	FACU	Nt Tree
	<i>Prunus virginiana</i>	CHOKE CHERRY	2	FAC-	Nt Shrub
	<i>RHAMNUS CATHARTICA</i>	COMMON BUCKTHORN	0	FACU	Ad Tree
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 22 cont.	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 23					
Upland	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Fragaria virginiana</i>	WILD STRAWBERRY	2	FAC-	Nt P-Forb
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>PINUS SYLVESTRIS</i>	SCOTCH PINE	0	UPL	Ad Tree
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Prunus serotina</i>	WILD BLACK CHERRY	2	FACU	Nt Tree
	<i>RHAMNUS CATHARTICA</i>	COMMON BUCKTHORN	0	FACU	Ad Tree
	<i>Rhus typhina</i>	STAGHORN SUMAC	2	UPL	Nt Tree
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>VIBURNUM OPULUS</i>	EUROPEAN Highbush CRANBERRY	0	FAC	Ad Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Wetland Complex 56	<i>Carex blanda</i>	SEDGE	1	FAC	Nt P-Sedge
	<i>Carex stricta</i>	SEDGE	4	OBL	Nt P-Sedge
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Quercus bicolor</i>	SWAMP WHITE OAK	8	FACW+	Nt Tree
	<i>RHAMNUS FRANGULA</i>	GLOSSY BUCKTHORN	0	FAC+	Ad Shrub
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 23, cont.					
Wetland Complex 56	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
Area 24	<i>Achillea millefolium</i>	YARROW	1	FACU	Nt P-Forb
	<i>AGROPYRON REPENS</i>	QUACK GRASS	0	FACU	Ad P-Grass
	<i>BROMUS INERMIS</i>	SMOOTH BROME	0	UPL	Ad P-Grass
	<i>CHRYSANTHEMUM LEUCANTHEMUM</i>	OX EYE DAISY	0	UPL	Ad P-Forb
	<i>CIRSIIUM VULGARE</i>	BULL THISTLE	0	FACU-	Ad B-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>DACTYLIS GLOMERATA</i>	ORCHARD GRASS	0	FACU	Ad P-Grass
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fragaria virginiana</i>	WILD STRAWBERRY	2	FAC-	Nt P-Forb
	<i>Fraxinus americana</i>	WHITE ASH	5	FACU	Nt Tree
	<i>Monarda fistulosa</i>	WILD BERGAMOT	2	FACU	Nt P-Forb
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>Potentilla simplex</i>	OLD FIELD CINQUEFOIL	2	FACU-	Nt P-Forb
	<i>Rhus typhina</i>	STAGHORN SUMAC	2	UPL	Nt Tree
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago speciosa</i>	SHOWY GOLDENROD	5	UPL	Nt P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 25					
Wetland Complex 24	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 25, cont.					
Wetland Complex 24	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
Wetland Complex 25	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
Wetland Complex 26	<i>Agrimonia parviflora</i>	SWAMP AGRIMONY	4	FAC+	Nt P-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Carex gracillima</i>	SEDGE	4	FACU	Nt P-Sedge
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Cornus stolonifera</i>	RED OSIER DOGWOOD	2	FACW	Nt Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Juncus torreyi</i>	TORREY'S RUSH	4	FACW	Nt P-Forb
	<i>Lycopus americanus</i>	COMMON WATER HOREHOUND	2	OBL	Nt P-Forb

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 25 cont.					
Wetland Complex 26	<i>Lycopus uniflorus</i>	NORTHERN BUGLE WEED	2	OBL	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Polygonum virginianum</i>	JUMPSEED	4	FAC	Nt P-Forb
	<i>Quercus bicolor</i>	SWAMP WHITE OAK	8	FACW+	Nt Tree
	<i>Quercus macrocarpa</i>	BUR OAK	5	FAC-	Nt Tree
	<i>RHAMNUS FRANGULA</i>	GLOSSY BUCKTHORN	0	FAC+	Ad Shrub
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Scirpus cyperinus</i>	WOOL GRASS	5	OBL	Nt P-Sedge
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Wetland Complex 27	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Lycopus americanus</i>	COMMON WATER HOREHOUND	2	OBL	Nt P-Forb
	<i>Quercus bicolor</i>	SWAMP WHITE OAK	8	FACW+	Nt Tree
	<i>Salix discolor</i>	PUSSY WILLOW	1	FACW	Nt Shrub
	<i>Scirpus cyperinus</i>	WOOL GRASS	5	OBL	Nt P-Sedge

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 25 cont.					
Wetland Complex 27	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
Wetland Complex 28	<i>Agrimonia parviflora</i>	SWAMP AGRIMONY	4	FAC+	Nt P-Forb
	<i>Apocynum cannabinum</i>	INDIAN HEMP	3	FAC	Nt P-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Carex gracillima</i>	SEDGE	4	FACU	Nt P-Sedge
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Cornus stolonifera</i>	RED OSIER DOGWOOD	2	FACW	Nt Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Lycopus americanus</i>	COMMON WATER HOREHOUND	2	OBL	Nt P-Forb
	<i>Lycopus uniflorus</i>	NORTHERN BUGLE WEED	2	OBL	Nt P-Forb
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Quercus bicolor</i>	SWAMP WHITE OAK	8	FACW+	Nt Tree
	RUMEX CRISPUS	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Salix discolor</i>	PUSSY WILLOW	1	FACW	Nt Shrub
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 25 cont.					
Wetland Complex 28	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Wetland Complex 29	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Bidens frondosus</i>	COMMON BEGGAR TICKS	1	FACW	Nt A-Forb
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Salix discolor</i>	PUSSY WILLOW	1	FACW	Nt Shrub
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>Typha latifolia</i>	BROAD LEAVED CATTAIL	1	OBL	Nt P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
Wetland Complex 30	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Lycopus americanus</i>	COMMON WATER HOREHOUND	2	OBL	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 25 cont.					
Wetland Complex 31	<i>Agrimonia parviflora</i>	SWAMP AGRIMONY	4	FAC+	Nt P-Forb
	<i>Carex gracillima</i>	SEDGE	4	FACU	Nt P-Sedge
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>Populus tremuloides</i>	QUAKING ASPEN	1	FAC	Nt Tree
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 26					
Wetland Complex 22	<i>Apocynum cannabinum</i>	INDIAN HEMP	3	FAC	Nt P-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Bidens frondosus</i>	COMMON BEGGAR TICKS	1	FACW	Nt A-Forb
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Juncus torreyi</i>	TORREY'S RUSH	4	FACW	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 26, cont.					
Wetland Complex 22	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
	<i>Typha latifolia</i>	BROAD LEAVED CATTAIL	1	OBL	Nt P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
Wetland Complex 23	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Bidens frondosus</i>	COMMON BEGGAR TICKS	1	FACW	Nt A-Forb
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Lycopus americanus</i>	COMMON WATER HOREHOUND	2	OBL	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
Area 27					
Wetland Complex 10	<i>AGROPYRON REPENS</i>	QUACK GRASS	0	FACU	Ad P-Grass
	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Erigeron annuus</i>	ANNUAL FLEABANE	0	FAC-	Nt B-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>PLANTAGO MAJOR</i>	COMMON PLANTAIN	0	FAC+	Ad P-Forb
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 27, cont.					
Wetland Complex 10	<i>Polygonum lapathifolium</i>	NODDING SMARTWEED	0	FACW+	Nt A-Forb
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
Wetland Complex 14	<i>Ambrosia artemisiifolia</i>	COMMON RAGWEED	0	FACU	Nt A-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Bidens cernuus</i>	NODDING BUR MARIGOLD	3	OBL	Nt A-Forb
	<i>Conyza canadensis</i>	HORSEWEED	0	FAC-	Nt A-Forb
	<i>DAUCUS CAROTA</i>	QUEEN ANNE'S LACE	0	UPL	Ad B-Forb
	<i>Polygonum lapathifolium</i>	NODDING SMARTWEED	0	FACW+	Nt A-Forb
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>SONCHUS ASPER</i>	PRICKLY SOW THISTLE	0	FAC	Ad A-Forb
Wetland Complex 16	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>CIRSIIUM ARVENSE</i>	CANADIAN THISTLE	0	FACU	Ad P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>SONCHUS ASPER</i>	PRICKLY SOW THISTLE	0	FAC	Ad A-Forb
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Wetland Complex 32	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Cornus stolonifera</i>	RED OSIER DOGWOOD	2	FACW	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 27 cont.					
Wetland Complex 32	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Salix discolor</i>	PUSSY WILLOW	1	FACW	Nt Shrub
Wetland Complex 33	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
Wetland Complex 48	<i>Asclepias incarnata</i>	SWAMP MILKWEED	6	OBL	Nt P-Forb
	<i>Aster lateriflorus</i>	SIDE FLOWERING ASTER	2	FACW-	Nt P-Forb
	<i>Bidens frondosus</i>	COMMON BEGGAR TICKS	1	FACW	Nt A-Forb
	<i>Erigeron philadelphicus</i>	MARSH FLEABANE	2	FACW	Nt P-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Polygonum pensylvanicum</i>	BIGSEED SMARTWEED	0	FACW+	Nt A-Forb
	<i>POLYGONUM PERSICARIA</i>	LADY'S THUMB	0	FACW	Ad A-Forb
	<i>Rumex orbiculatus</i>	GREAT WATER DOCK	9	OBL	Nt P-Forb
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
Wetland Complex 49	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>AILANTHUS ALTISSIMA</i>	TREE OF HEAVEN	0	UPL	Ad Tree
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 28	<i>Acer rubrum</i>	RED MAPLE	1	FAC	Nt Tree
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster lateriflorus</i>	SIDE FLOWERING ASTER	2	FACW-	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Boehmeria cylindrica</i>	FALSE NETTLE	5	OBL	Nt P-Forb
	<i>Carex bebbii</i>	SEDGE	4	OBL	Nt P-Sedge
	<i>Carex lupulina</i>	SEDGE	4	OBL	Nt P-Sedge
	<i>Carpinus caroliniana</i>	BLUE BEECH	6	FAC	Nt Tree

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 28 cont.	<i>CELASTRUS ORBICULATA</i>	ORIENTAL BITTERSWEET	0	UPL	Ad W-Vine
	<i>Celtis occidentalis</i>	HACKBERRY	5	FAC-	Nt Tree
	<i>Chelone glabra</i>	TURTLEHEAD	7	OBL	Nt P-Forb
	<i>Circaea lutetiana</i>	ENCHANTER'S NIGHTSHADE	2	FACU	Nt P-Forb
	<i>Erigeron philadelphicus</i>	MARSH FLEABANE	2	FACW	Nt P-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus nigra</i>	BLACK ASH	6	FACW+	Nt Tree
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Geum canadense</i>	WHITE AVENS	1	FAC	Nt P-Forb
	<i>Geum laciniatum</i>	ROUGH AVENS	2	FACW	Nt P-Forb
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Iris virginica</i>	SOUTHERN BLUE FLAG	5	OBL	Nt P-Forb
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb
	<i>Mentha arvensis</i>	WILD MINT	3	FACW	Nt P-Forb
	<i>Osmunda regalis</i>	ROYAL FERN	5	OBL	Nt Fern
	<i>POA COMPRESSA</i>	CANADA BLUEGRASS	0	FACU+	Ad P-Grass
	<i>PRUNELLA VULGARIS</i>	LAWN PRUNELLA	0	FAC	Nt P-Forb
	<i>Prunus virginiana</i>	CHOKE CHERRY	2	FAC-	Nt Shrub
	<i>Quercus macrocarpa</i>	BUR OAK	5	FAC-	Nt Tree
	<i>Ribes americanum</i>	WILD BLACK CURRANT	6	FACW	Nt Shrub
	<i>Scirpus atrovirens</i>	BULRUSH	3	OBL	Nt P-Sedge
	<i>Scirpus cyperinus</i>	WOOL GRASS	5	OBL	Nt P-Sedge
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Viburnum opulus var. americanum</i>	HIGHBUSH CRANBERRY	5	FACW	Nt Shrub



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 29					
Wetland Complex 4	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster lateriflorus</i>	SIDE FLOWERING ASTER	2	FACW-	Nt P-Forb
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Chelone glabra</i>	TURTLEHEAD	7	OBL	Nt P-Forb
	<i>Erechtites hieracifolia</i>	FIREWEED	2	FACU	Nt A-Forb
	<i>Eupatorium perfoliatum</i>	COMMON BONESET	4	FACW+	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Lysimachia ciliata</i>	FRINGED LOOSESTRIPE	4	FACW	Nt P-Forb
	<i>Oxalis stricta</i>	COMMON YELLOW WOOD SORREL	0	FACU	Nt P-Forb
	<i>Panicum clandestinum</i>	PANIC GRASS	3	FACW	Nt P-Grass
	<i>Penthorum sedoides</i>	DITCH STONECROP	3	OBL	Nt P-Forb
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>PRUNELLA VULGARIS</i>	LAWN PRUNELLA	0	FAC	Nt P-Forb
	<i>Sambucus canadensis</i>	ELDERBERRY	3	FACW-	Nt Shrub
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solanum ptycanthum</i>	BLACK NIGHTSHADE	1	UPL	Nt A-Forb
	<i>Solidago altissima</i>	TALL GOLDENROD	1	FACU	Nt P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>TARAXACUM OFFICINALE</i>	COMMON DANDELION	0	FACU	Ad P-Forb
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
Wetland Complex 5	<i>Aster lateriflorus</i>	SIDE FLOWERING ASTER	2	FACW-	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Bidens cernuus</i>	NODDING BUR MARIGOLD	3	OBL	Nt A-Forb
	<i>Carex granularis</i>	SEDGE	2	FACW+	Nt P-Sedge

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 29 cont.					
Wetland Complex 5	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Glyceria striata</i>	FOWL MANNA GRASS	4	OBL	Nt P-Grass
	<i>Penthorum sedoides</i>	DITCH STONECROP	3	OBL	Nt P-Forb
	<i>PRUNELLA VULGARIS</i>	LAWN PRUNELLA	0	FAC	Nt P-Forb
	<i>Scirpus atrovirens</i>	BULRUSH	3	OBL	Nt P-Sedge
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
Wetland Complex 6	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster lateriflorus</i>	SIDE FLOWERING ASTER	2	FACW-	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Carex debilis</i>	SWAMP SEDGE	6	FACW	Nt P-Sedge
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Salix eriocephala</i>	WILLOW	2	FACW	Nt Shrub
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
Wetland Complex 7	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster lateriflorus</i>	SIDE FLOWERING ASTER	2	FACW-	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Carex debilis</i>	SWAMP SEDGE	6	FACW	Nt P-Sedge
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Salix eriocephala</i>	WILLOW	2	FACW	Nt Shrub

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 29 cont.					
Wetland Complex 7	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
Area 30					
Wetland Complexes 1 and 2	<i>Alnus rugosa</i>	TAG ALDER	5	OBL	Nt Shrub
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Boehmeria cylindrica</i>	FALSE NETTLE	5	OBL	Nt P-Forb
	<i>Carex crinita</i>	SEDGE	4	FACW+	Nt P-Sedge
	<i>Carex lacustris</i>	SEDGE	6	OBL	Nt P-Sedge
	<i>Carex stipata</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Echinochloa muricata</i>	BARNYARD GRASS	1	OBL	Nt A-Grass
	<i>Eupatorium perfoliatum</i>	COMMON BONESET	4	FACW+	Nt P-Forb
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Geum canadense</i>	WHITE AVENS	1	FAC	Nt P-Forb
	<i>Ilex verticillata</i>	MICHIGAN HOLLY	5	FACW+	Nt Shrub
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Juncus effusus</i>	SOFT STEMMED RUSH	3	OBL	Nt P-Forb
	<i>Lemna minor</i>	SMALL DUCKWEED	5	OBL	Nt A-Forb
	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>Mentha arvensis</i>	WILD MINT	3	FACW	Nt P-Forb
	<i>Onoclea sensibilis</i>	SENSITIVE FERN	2	FACW	Nt Fern
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>Polygonum virginianum</i>	JUMPSEED	4	FAC	Nt P-Forb
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>PRUNELLA VULGARIS</i>	LAWN PRUNELLA	0	FAC	Nt P-Forb

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 30 cont.					
Wetland Complexes 1 and 2	<i>Quercus bicolor</i>	SWAMP WHITE OAK	8	FACW+	Nt Tree
	<i>Ribes americanum</i>	WILD BLACK CURRANT	6	FACW	Nt Shrub
	<i>ROSA MULTIFLORA</i>	MULTIFLORA ROSE	0	FACU	Ad Shrub
	<i>Rubus strigosus</i>	WILD RED RASPBERRY	2	FACW-	Nt Shrub
	<i>SALIX ALBA</i>	WHITE WILLOW	0	FACW	Ad Tree
	<i>Salix nigra</i>	BLACK WILLOW	5	OBL	Nt Tree
	<i>Sambucus canadensis</i>	ELDERBERRY	3	FACW-	Nt Shrub
	<i>Scirpus cyperinus</i>	WOOL GRASS	5	OBL	Nt P-Sedge
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Solidago rugosa</i>	ROUGH GOLDENROD	3	FAC+	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>TYPHA ANGUSTIFOLIA</i>	NARROW LEAVED CATTAIL	0	OBL	Ad P-Forb
	<i>Typha latifolia</i>	BROAD LEAVED CATTAIL	1	OBL	Nt P-Forb
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Verbena hastata</i>	BLUE VERVAIN	4	FACW+	Nt P-Forb
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Viburnum opulus var. americanum</i>	HIGHBUSH CRANBERRY	5	FACW	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 31					
Wetland Complexes 11 and 12	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>Acer saccharinum</i>	SILVER MAPLE	2	FACW	Nt Tree
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Equisetum arvense</i>	COMMON HORSETAIL	0	FAC	Nt F...Ally
	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass

Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 31 cont.					
Wetland Complexes 11 and 12	<i>LYTHRUM SALICARIA</i>	PURPLE LOOSESTRIFE	0	OBL	Ad P-Forb
	<i>Phragmites australis</i>	REED	0	FACW+	Nt P-Grass
	<i>Populus deltoides</i>	COTTONWOOD	1	FAC+	Nt Tree
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
Area 32	<i>Acer negundo</i>	BOX ELDER	0	FACW-	Nt Tree
	<i>ALLIARIA PETIOLATA</i>	GARLIC MUSTARD	0	FAC	Ad B-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Geum canadense</i>	WHITE AVENS	1	FAC	Nt P-Forb
	<i>Geum laciniatum</i>	ROUGH AVENS	2	FACW	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine
Area 33					
Wetland Complexes 8 and 9	<i>Alisma plantago-aquatica</i>	WATER PLANTAIN	1	OBL	Nt P-Forb
	<i>Asclepias incarnata</i>	SWAMP MILKWEED	6	OBL	Nt P-Forb
	<i>Aster lanceolatus</i>	EASTERN LINED ASTER	2	FACW	Nt P-Forb
	<i>Aster novae-angliae</i>	NEW ENGLAND ASTER	3	FACW	Nt P-Forb
	<i>Carex vulpinoidea</i>	SEDGE	1	OBL	Nt P-Sedge
	<i>Chelone glabra</i>	TURTLEHEAD	7	OBL	Nt P-Forb
	<i>Cornus amomum</i>	SILKY DOGWOOD	2	FACW+	Nt Shrub
	<i>Cornus foemina</i>	GRAY DOGWOOD	1	FACW-	Nt Shrub
	<i>Echinochloa muricata</i>	BARNYARD GRASS	1	OBL	Nt A-Grass



Wetland Complex	Scientific Name	Common Name	C	Wetness	Physiognomy
Area 33 cont.					
Wetland Complexes 8 and 9	<i>Euthamia graminifolia</i>	GRASS LEAVED GOLDENROD	3	FACW-	Nt P-Forb
	<i>Equisetum arvense</i>	COMMON HORSETAIL	0	FAC	Nt F...Ally
	<i>Fraxinus pennsylvanica</i>	RED ASH	2	FACW	Nt Tree
	<i>Impatiens capensis</i>	SPOTTED TOUCH ME NOT	2	FACW	Nt A-Forb
	<i>Juncus tenuis</i>	PATH RUSH	1	FAC	Nt P-Forb
	<i>Lysimachia ciliata</i>	FRINGED LOOSESTRIFE	4	FACW	Nt P-Forb
	<i>Mimulus ringens</i>	MONKEY FLOWER	5	OBL	Nt P-Forb
	<i>Phalaris arundinacea</i>	REED CANARY GRASS	0	FACW+	Nt P-Grass
	<i>RHAMNUS FRANGULA</i>	GLOSSY BUCKTHORN	0	FAC+	Ad Shrub
	<i>RUMEX CRISPUS</i>	CURLY DOCK	0	FAC+	Ad P-Forb
	<i>Salix amygdaloides</i>	PEACH LEAVED WILLOW	3	FACW	Nt Tree
	<i>Salix eriocephala</i>	WILLOW	2	FACW	Nt Shrub
	<i>Scirpus atrovirens</i>	BULRUSH	3	OBL	Nt P-Sedge
	<i>Scirpus cyperinus</i>	WOOL GRASS	5	OBL	Nt P-Sedge
	<i>SOLANUM DULCAMARA</i>	BITTERSWEET NIGHTSHADE	0	FAC	Ad P-Forb
	<i>Solidago gigantea</i>	LATE GOLDENROD	3	FACW	Nt P-Forb
	<i>Spiraea alba</i>	MEADOWSWEET	4	FACW+	Nt Shrub
	<i>Toxicodendron radicans</i>	POISON IVY	2	FAC+	Nt W-Vine
	<i>Ulmus americana</i>	AMERICAN ELM	1	FACW-	Nt Tree
	<i>Viburnum lentago</i>	NANNYBERRY	4	FAC+	Nt Shrub
	<i>Vitis riparia</i>	RIVERBANK GRAPE	3	FACW-	Nt W-Vine

Note: Scientific names shown in capital letters indicate adventive species

## ATTACHMENT C-5

Table 3.3

Floristic Quality Assessments for Habitat Areas

Table 3.3 Floristic Quality Assessments for Habitat Areas

Area	Floristic Quality Assesment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 1	NATIVE SPECIES	13	Native	13	50.00%	Adventive	3	50.00%
	Total Species	26	Tree	7	26.90%	Tree	2	7.70%
	NATIVE MEAN C	3.2	Shrub	0	0.00%	Shrub	0	0.00%
	W/Adventives	1.6	W-Vine	2	7.70%	W-Vine	0	0.00%
	NATIVE FQI	11.6	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	8.2	P-Forb	2	7.70%	P-Forb	6	23.10%
	NATIVE MEAN W	0	B-Forb	0	0.00%	B-Forb	2	7.70%
	W/Adventives	1.5	A-Forb	2	7.70%	A-Forb	1	3.80%
	Faculative	AVG:	P-Grass	0	0.00%	P-Grass	2	7.70%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 2	NATIVE SPECIES	17	Native	17	54.80%	Adventive	14	45.20%
	Total Species	31	Tree	2	6.50%	Tree	0	0.00%
	NATIVE MEAN C	3	Shrub	3	9.70%	Shrub	0	0.00%
	W/Adventives	1.6	W-Vine	3	9.70%	W-Vine	0	0.00%
	NATIVE FQI	12.4	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	9.2	P-Forb	7	22.60%	P-Forb	7	22.60%
	NATIVE MEAN W	0.6	B-Forb	0	0.00%	B-Forb	4	12.90%
	W/Adventives	1.9	A-Forb	1	3.20%	A-Forb	1	3.20%
	Faculative (-)	AVG:	P-Grass	1	3.20%	P-Grass	2	6.50%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment								
	Floristic Quality Summary		Physiognomy	Number	Percent		Physiognomy	Number	Percent
Area 3	NATIVE SPECIES	13	Native	13	76.50%		Adventive	4	23.50%
	Total Species	17	Tree	6	35.30%		Tree	0	0.00%
	NATIVE MEAN C	2.8	Shrub	2	11.80%		Shrub	2	11.80%
	W/Adventives	2.2	W-Vine	3	17.60%		W-Vine	0	0.00%
	NATIVE FQI	10.3	H-Vine	0	0.00%		H-Vine	0	0.00%
	W/Adventives	9	P-Forb	2	11.80%		P-Forb	2	11.80%
	NATIVE MEAN W	1.5	B-Forb	0	0.00%		B-Forb	0	0.00%
	W/Adventives	1.6	A-Forb	0	0.00%		A-Forb	0	0.00%
	Faculative (-)	AVG:	P-Grass	0	0.00%		P-Grass	0	0.00%
			A-Grass	0	0.00%		A-Grass	0	0.00%
			P-Sedge	0	0.00%		P-Sedge	0	0.00%
			A-Sedge	0	0.00%		A-Sedge	0	0.00%
			Fern	0	0.00%				
Area 4	NATIVE SPECIES	8	Native	8	44.40%		Adventive	10	55.60%
	Total Species	18	Tree	0	0.00%		Tree	0	0.00%
	NATIVE MEAN C	1.8	Shrub	0	0.00%		Shrub	0	0.00%
	W/Adventives	0.8	W-Vine	0	0.00%		W-Vine	0	0.00%
	NATIVE FQI	4.9	H-Vine	0	0.00%		H-Vine	0	0.00%
	W/Adventives	3.3	P-Forb	7	38.90%		P-Forb	4	22.20%
	NATIVE MEAN W	1.3	B-Forb	0	0.00%		B-Forb	3	16.70%
	W/Adventives	1.9	A-Forb	1	5.60%		A-Forb	1	5.60%
	Faculative (-)	AVG:	P-Grass	0	0.00%		P-Grass	2	11.10%
			A-Grass	0	0.00%		A-Grass	0	0.00%
			P-Sedge	0	0.00%		P-Sedge	0	0.00%
			A-Sedge	0	0.00%		A-Sedge	0	0.00%
			Fern	0	0.00%				

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 5	NATIVE SPECIES	3	Native	3	30.00%	Adventive	7	70.00%
	Total Species	10	Tree	0	0.00%	Tree	0	0.00%
	NATIVE MEAN C	1	Shrub	0	0.00%	Shrub	1	10.00%
	W/Adventives	0.3	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	1.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	0.9	P-Forb	2	20.00%	P-Forb	3	30.00%
	NATIVE MEAN W	3	B-Forb	0	0.00%	B-Forb	1	10.00%
	W/Adventives	2.5	A-Forb	1	10.00%	A-Forb	1	10.00%
	Fac. Upland	AVG:	P-Grass	0	0.00%	P-Grass	1	10.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 6	NATIVE SPECIES	5	Native	5	45.50%	Adventive	6	54.50%
	Total Species	11	Tree	1	9.10%	Tree	0	0.00%
	NATIVE MEAN C	1	Shrub	1	9.10%	Shrub	0	0.00%
	W/Adventives	0.5	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	2.2	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	1.5	P-Forb	1	9.10%	P-Forb	3	27.30%
	NATIVE MEAN W	-1	B-Forb	0	0.00%	B-Forb	1	9.10%
	W/Adventives	1.1	A-Forb	2	18.20%	A-Forb	0	0.00%
	Faculative (+)	AVG:	P-Grass	0	0.00%	P-Grass	2	18.20%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			



Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 7	NATIVE SPECIES	5	Native	5	62.50%	Adventive	3	37.50%
	Total Species	8	Tree	0	0.00%	Tree	2	25.00%
	NATIVE MEAN C	1.2	Shrub	1	12.50%	Shrub	0	0.00%
	W/Adventives	0.8	W-Vine	1	12.50%	W-Vine	0	0.00%
	NATIVE FQI	2.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	2.1	P-Forb	2	25.00%	P-Forb	0	0.00%
	NATIVE MEAN W	-0.6	B-Forb	0	0.00%	B-Forb	1	12.50%
	W/Adventives	1.3	A-Forb	0	0.00%	A-Forb	0	0.00%
	Faculative (+)	AVG:	P-Grass	1	12.50%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 8	NATIVE SPECIES	23	Native	23	82.10%	Adventive	5	17.90%
	Total Species	28	Tree	8	28.60%	Tree	0	0.00%
	NATIVE MEAN C	3	Shrub	3	10.70%	Shrub	2	7.10%
	W/Adventives	2.5	W-Vine	2	7.10%	W-Vine	1	3.60%
	NATIVE FQI	14.6	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	13.2	P-Forb	8	28.60%	P-Forb	0	0.00%
	NATIVE MEAN W	1.8	B-Forb	0	0.00%	B-Forb	1	3.60%
	W/Adventives	2	A-Forb	1	3.60%	A-Forb	0	0.00%
	Fac. Upland (+)	AVG:	P-Grass	0	0.00%	P-Grass	1	3.60%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	3.60%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 9	NATIVE SPECIES	18	Native	18	54.50%	Adventive	15	45.50%
	Total Species	33	Tree	1	3.00%	Tree	0	0.00%
	NATIVE MEAN C	1.7	Shrub	4	12.10%	Shrub	3	9.10%
	W/Adventives	0.9	W-Vine	1	3.00%	W-Vine	0	0.00%
	NATIVE FQI	7.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	5.2	P-Forb	8	24.20%	P-Forb	4	12.10%
	NATIVE MEAN W	0.8	B-Forb	0	0.00%	B-Forb	4	12.10%
	W/Adventives	2.1	A-Forb	2	6.10%	A-Forb	0	0.00%
	Faculative (-)	AVG:	P-Grass	1	3.00%	P-Grass	4	12.10%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	3.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 10	NATIVE SPECIES	2	Native	2	33.30%	Adventive	4	66.70%
	Total Species	6	Tree	0	0.00%	Tree	0	0.00%
	NATIVE MEAN C	0.5	Shrub	0	0.00%	Shrub	0	0.00%
	W/Adventives	0.2	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	0.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	0.4	P-Forb	1	16.70%	P-Forb	2	33.30%
	NATIVE MEAN W	3	B-Forb	0	0.00%	B-Forb	2	33.30%
	W/Adventives	3.3	A-Forb	1	16.70%	A-Forb	0	0.00%
	Fac. Upland	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 11	NATIVE SPECIES	1	Native	1	20.00%	Adventive	4	80.00%
	Total Species	5	Tree	0	0.00%	Tree	0	0.00%
	NATIVE MEAN C	1	Shrub	0	0.00%	Shrub	0	0.00%
	W/Adventives	0.2	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	0.4	P-Forb	1	20.00%	P-Forb	2	40.00%
	NATIVE MEAN W	3	B-Forb	0	0.00%	B-Forb	2	40.00%
	W/Adventives	3.4	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Upland	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 12	NATIVE SPECIES	29	Native	29	64.40%	Adventive	16	35.60%
	Total Species	45	Tree	5	11.10%	Tree	1	2.20%
	NATIVE MEAN C	2.3	Shrub	5	11.10%	Shrub	1	2.20%
	W/Adventives	1.5	W-Vine	3	6.70%	W-Vine	0	0.00%
	NATIVE FQI	12.3	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	9.8	P-Forb	13	28.90%	P-Forb	6	13.30%
	NATIVE MEAN W	1.1	B-Forb	0	0.00%	B-Forb	2	4.40%
	W/Adventives	1.7	A-Forb	2	4.40%	A-Forb	0	0.00%
	Faculative (-)	AVG:	P-Grass	0	0.00%	P-Grass	6	13.30%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	2.20%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 13	NATIVE SPECIES	22	Native	22	73.30%	Adventive	8	26.70%
	Total Species	30	Tree	2	6.70%	Tree	0	0.00%
	NATIVE MEAN C	2.9	Shrub	1	3.30%	Shrub	0	0.00%
	W/Adventives	2.1	W-Vine	3	10.00%	W-Vine	0	0.00%
	NATIVE FQI	13.4	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	11.5	P-Forb	7	23.30%	P-Forb	6	20.00%
	NATIVE MEAN W	-2.5	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2	A-Forb	3	10.00%	A-Forb	2	6.70%
	Fac. Wetland (-)	AVG:	P-Grass	3	10.00%	P-Grass	0	0.00%
			A-Grass	1	3.30%	A-Grass	0	0.00%
			P-Sedge	2	6.70%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 14-	NATIVE SPECIES	7	Native	7	70.00%	Adventive	3	30.00%
Wetland	Total Species	10	Tree	0	0.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.7	Shrub	0	0.00%	Shrub	0	0.00%
45	W/Adventives	1.2	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	4.5	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	3.8	P-Forb	4	40.00%	P-Forb	3	30.00%
	NATIVE MEAN W	-1.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-1.3	A-Forb	2	20.00%	A-Forb	0	0.00%
	Faculative (+)	AVG:	P-Grass	1	10.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 14 -	NATIVE SPECIES	8	Native	8	61.50%	Adventive	5	38.50%
Wetland	Total Species	13	Tree	0	0.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.4	Shrub	0	0.00%	Shrub	0	0.00%
46	W/Adventives	0.8	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	3.9	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	3.1	P-Forb	3	23.10%	P-Forb	5	38.50%
	NATIVE MEAN W	-3.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.3	A-Forb	2	15.40%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	15.40%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	7.70%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 14 -	NATIVE SPECIES	10	Native	10	83.30%	Adventive	2	16.70%
Wetland	Total Species	12	Tree	2	16.70%	Tree	1	8.30%
Complex	NATIVE MEAN C	1.4	Shrub	0	0.00%	Shrub	0	0.00%
47	W/Adventives	1.2	W-Vine	1	8.30%	W-Vine	0	0.00%
	NATIVE FQI	4.4	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	4	P-Forb	1	8.30%	P-Forb	1	8.30%
	NATIVE MEAN W	-2.6	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.2	A-Forb	3	25.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	16.70%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	8.30%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			



Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 15	NATIVE SPECIES	8	Native	8	47.10%	Adventive	9	52.90%
	Total Species	17	Tree	1	5.90%	Tree	2	11.80%
	NATIVE MEAN C	2.4	Shrub	3	17.60%	Shrub	1	5.90%
	W/Adventives	1.1	W-Vine	1	5.90%	W-Vine	0	0.00%
	NATIVE FQI	6.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	4.6	P-Forb	0	0.00%	P-Forb	5	29.40%
	NATIVE MEAN W	-2.9	B-Forb	0	0.00%	B-Forb	1	5.90%
	W/Adventives	-2.2	A-Forb	1	5.90%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	5.90%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	5.90%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 16	NATIVE SPECIES	6	Native	6	85.70%	Adventive	1	14.30%
	Total Species	7	Tree	0	0.00%	Tree	0	0.00%
	NATIVE MEAN C	1.5	Shrub	1	14.30%	Shrub	0	0.00%
	W/Adventives	1.3	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	3.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	3.4	P-Forb	2	28.60%	P-Forb	1	14.30%
	NATIVE MEAN W	-3.8	B-Forb	1	14.30%	B-Forb	0	0.00%
	W/Adventives	-4	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland (+)	AVG:	P-Grass	2	28.60%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 17	NATIVE SPECIES	10	Native	10	100.00%	Adventive	0	0.00%
	Total Species	10	Tree	3	30.00%	Tree	0	0.00%
	NATIVE MEAN C	1.9	Shrub	2	20.00%	Shrub	0	0.00%
	W/Adventives	1.9	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	6	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	6	P-Forb	3	30.00%	P-Forb	0	0.00%
	NATIVE MEAN W	-3.1	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.1	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	20.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 18	NATIVE SPECIES	18	Native	18	100.00%	Adventive	0	0.00%
	Total Species	18	Tree	5	27.80%	Tree	0	0.00%
	NATIVE MEAN C	2.7	Shrub	5	27.80%	Shrub	0	0.00%
	W/Adventives	2.7	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	11.5	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	11.5	P-Forb	3	16.70%	P-Forb	0	0.00%
	NATIVE MEAN W	-3.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.4	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	11.10%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	2	11.10%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	5.60%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 19	NATIVE SPECIES	8	Native	8	72.70%	Adventive	3	27.30%
	Total Species	11	Tree	5	45.50%	Tree	1	9.10%
	NATIVE MEAN C	3.3	Shrub	1	9.10%	Shrub	1	9.10%
	W/Adventives	2.4	W-Vine	1	9.10%	W-Vine	0	0.00%
	NATIVE FQI	9.2	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	7.8	P-Forb	1	9.10%	P-Forb	0	0.00%
	NATIVE MEAN W	1.3	B-Forb	0	0.00%	B-Forb	1	9.10%
	W/Adventives	2.1	A-Forb	0	0.00%	A-Forb	0	0.00%
	Faculative (-)	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 20	NATIVE SPECIES	14	Native	14	87.50%	Adventive	2	12.50%
	Total Species	16	Tree	2	12.50%	Tree	0	0.00%
	NATIVE MEAN C	1.6	Shrub	1	6.30%	Shrub	0	0.00%
	W/Adventives	1.4	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	6.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	5.8	P-Forb	5	31.30%	P-Forb	2	12.50%
	NATIVE MEAN W	-3.1	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.3	A-Forb	1	6.30%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	12.50%	P-Grass	0	0.00%
			A-Grass	1	6.30%	A-Grass	0	0.00%
			P-Sedge	1	6.30%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	6.30%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 21	NATIVE SPECIES	21	Native	21	84.00%	Adventive	4	16.00%
	Total Species	25	Tree	9	36.00%	Tree	1	4.00%
	NATIVE MEAN C	3.1	Shrub	4	16.00%	Shrub	1	4.00%
	W/Adventives	2.6	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	14.4	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	13.2	P-Forb	5	20.00%	P-Forb	1	4.00%
	NATIVE MEAN W	1.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	1.4	A-Forb	1	4.00%	A-Forb	0	0.00%
	Faculative (-)	AVG:	P-Grass	0	0.00%	P-Grass	1	4.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	4.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	4.00%			
Area 22	NATIVE SPECIES	21	Native	21	77.80%	Adventive	6	22.20%
	Total Species	27	Tree	4	14.80%	Tree	1	3.70%
	NATIVE MEAN C	2.3	Shrub	4	14.80%	Shrub	1	3.70%
	W/Adventives	1.8	W-Vine	2	7.40%	W-Vine	0	0.00%
	NATIVE FQI	10.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	9.4	P-Forb	10	37.00%	P-Forb	1	3.70%
	NATIVE MEAN W	-0.3	B-Forb	0	0.00%	B-Forb	1	3.70%
	W/Adventives	0.6	A-Forb	0	0.00%	A-Forb	0	0.00%
	Faculative	AVG:	P-Grass	0	0.00%	P-Grass	2	7.40%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	3.70%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 23	NATIVE SPECIES	17	Native	17	68.00%	Adventive	8	32.00%
	Total Species	25	Tree	7	28.00%	Tree	2	8.00%
	NATIVE MEAN C	2.6	Shrub	2	8.00%	Shrub	2	8.00%
	W/Adventives	1.8	W-Vine	1	4.00%	W-Vine	0	0.00%
	NATIVE FQI	10.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	8.8	P-Forb	3	12.00%	P-Forb	3	12.00%
	NATIVE MEAN W	-1.2	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-0.5	A-Forb	0	0.00%	A-Forb	0	0.00%
	Faculative (+)	AVG:	P-Grass	2	8.00%	P-Grass	1	4.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	2	8.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 24	NATIVE SPECIES	11	Native	11	57.90%	Adventive	8	42.10%
	Total Species	19	Tree	2	10.50%	Tree	0	0.00%
	NATIVE MEAN C	2.5	Shrub	1	5.30%	Shrub	0	0.00%
	W/Adventives	1.4	W-Vine	1	5.30%	W-Vine	0	0.00%
	NATIVE FQI	8.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	6.2	P-Forb	7	36.80%	P-Forb	2	10.50%
	NATIVE MEAN W	1.9	B-Forb	0	0.00%	B-Forb	2	10.50%
	W/Adventives	2.7	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Upland (+)	AVG:	P-Grass	0	0.00%	P-Grass	4	21.10%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			



Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 25 -	NATIVE SPECIES	9	Native	9	100.00%	Adventive	0	0.00%
Wetland	Total Species	9	Tree	2	22.20%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.3	Shrub	4	44.40%	Shrub	0	0.00%
24	W/Adventives	2.3	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	7	P-Forb	1	11.10%	P-Forb	0	0.00%
	NATIVE MEAN W	-3.3	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.3	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	22.20%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 25 -	NATIVE SPECIES	10	Native	10	100.00%	Adventive	0	0.00%
Wetland	Total Species	10	Tree	1	10.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.4	Shrub	2	20.00%	Shrub	0	0.00%
25	W/Adventives	2.4	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	7.6	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	7.6	P-Forb	5	50.00%	P-Forb	0	0.00%
	NATIVE MEAN W	-3.1	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.1	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	20.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 25 -	NATIVE SPECIES	29	Native	29	93.50%	Adventive	2	6.50%
Wetland	Total Species	31	Tree	4	12.90%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.9	Shrub	6	19.40%	Shrub	1	3.20%
26	W/Adventives	2.7	W-Vine	2	6.50%	W-Vine	0	0.00%
	NATIVE FQI	15.4	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	14.9	P-Forb	11	35.50%	P-Forb	1	3.20%
	NATIVE MEAN W	-2.7	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.6	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	3	9.70%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	3	9.70%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 25 -	NATIVE SPECIES	16	Native	16	100.00%	Adventive	0	0.00%
Wetland	Total Species	16	Tree	2	12.50%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.9	Shrub	4	25.00%	Shrub	0	0.00%
27	W/Adventives	2.9	W-Vine	1	6.30%	W-Vine	0	0.00%
	NATIVE FQI	11.8	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	11.8	P-Forb	6	37.50%	P-Forb	0	0.00%
	NATIVE MEAN W	-3.1	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.1	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	6.30%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	2	12.50%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 25 -	NATIVE SPECIES	24	Native	24	96.00%	Adventive	1	4.00%
Wetland	Total Species	25	Tree	3	12.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.7	Shrub	6	24.00%	Shrub	0	0.00%
28	W/Adventives	2.6	W-Vine	2	8.00%	W-Vine	0	0.00%
	NATIVE FQI	13.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	12.8	P-Forb	9	36.00%	P-Forb	1	4.00%
	NATIVE MEAN W	-2.6	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.6	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	8.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	2	8.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 25 -	NATIVE SPECIES	10	Native	10	90.90%	Adventive	1	9.10%
Wetland	Total Species	11	Tree	3	27.30%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.5	Shrub	3	27.30%	Shrub	0	0.00%
29	W/Adventives	1.4	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	4.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	4.5	P-Forb	2	18.20%	P-Forb	1	9.10%
	NATIVE MEAN W	-3.2	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3	A-Forb	1	9.10%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	9.10%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 25 -	NATIVE SPECIES	10	Native	10	100.00%	Adventive	0	0.00%
Wetland	Total Species	10	Tree	2	20.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	2	Shrub	1	10.00%	Shrub	0	0.00%
30	W/Adventives	2	W-Vine	2	20.00%	W-Vine	0	0.00%
	NATIVE FQI	6.3	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	6.3	P-Forb	3	30.00%	P-Forb	0	0.00%
	NATIVE MEAN W	-2.9	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.9	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	20.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 25 -	NATIVE SPECIES	15	Native	15	93.80%	Adventive	1	6.30%
Wetland	Total Species	16	Tree	4	25.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.4	Shrub	3	18.80%	Shrub	0	0.00%
31	W/Adventives	2.3	W-Vine	1	6.30%	W-Vine	0	0.00%
	NATIVE FQI	9.3	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	9	P-Forb	4	25.00%	P-Forb	1	6.30%
	NATIVE MEAN W	-1.9	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-1.8	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	2	12.50%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	6.30%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 26 -	NATIVE SPECIES	15	Native	15	88.20%	Adventive	2	11.80%
Wetland	Total Species	17	Tree	3	17.60%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.9	Shrub	3	17.60%	Shrub	0	0.00%
22	W/Adventives	1.6	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	7.2	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	6.8	P-Forb	6	35.30%	P-Forb	2	11.80%
	NATIVE MEAN W	-3	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3	A-Forb	1	5.90%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	2	11.80%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 26 -	NATIVE SPECIES	9	Native	9	81.80%	Adventive	2	18.20%
Wetland	Total Species	11	Tree	2	18.20%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.4	Shrub	1	9.10%	Shrub	0	0.00%
23	W/Adventives	1.2	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	4.3	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	3.9	P-Forb	3	27.30%	P-Forb	2	18.20%
	NATIVE MEAN W	-3.6	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.5	A-Forb	1	9.10%	A-Forb	0	0.00%
	Fac. Wetland (+)	AVG:	P-Grass	2	18.20%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 27 -	NATIVE SPECIES	8	Native	8	61.50%	Adventive	5	38.50%
Wetland	Total Species	13	Tree	1	7.70%	Tree	0	0.00%
Complex	NATIVE MEAN C	1	Shrub	0	0.00%	Shrub	0	0.00%
10	W/Adventives	0.6	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	2.8	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	2.2	P-Forb	4	30.80%	P-Forb	3	23.10%
	NATIVE MEAN W	-0.4	B-Forb	1	7.70%	B-Forb	0	0.00%
	W/Adventives	-0.4	A-Forb	2	15.40%	A-Forb	0	0.00%
	Faculative	AVG:	P-Grass	0	0.00%	P-Grass	2	15.40%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 27 -	NATIVE SPECIES	7	Native	7	77.80%	Adventive	2	22.20%
Wetland	Total Species	9	Tree	1	11.10%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.3	Shrub	0	0.00%	Shrub	0	0.00%
14	W/Adventives	1	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	3.4	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	3	P-Forb	2	22.20%	P-Forb	0	0.00%
	NATIVE MEAN W	-1.7	B-Forb	0	0.00%	B-Forb	1	11.10%
	W/Adventives	-0.8	A-Forb	4	44.40%	A-Forb	1	11.10%
	Fac. Wetland (-)	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			



Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 27 -	NATIVE SPECIES	6	Native	6	66.70%	Adventive	3	33.30%
Wetland	Total Species	9	Tree	0	0.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.2	Shrub	2	22.20%	Shrub	0	0.00%
16	W/Adventives	1.4	W-Vine	1	11.10%	W-Vine	0	0.00%
	NATIVE FQI	5.3	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	4.3	P-Forb	2	22.20%	P-Forb	2	22.20%
	NATIVE MEAN W	-2.5	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-1.4	A-Forb	0	0.00%	A-Forb	1	11.10%
	Fac. Wetland (-)	AVG:	P-Grass	1	11.10%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 27 -	NATIVE SPECIES	5	Native	5	83.30%	Adventive	1	16.70%
Wetland	Total Species	6	Tree	0	0.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	1.2	Shrub	3	50.00%	Shrub	0	0.00%
32	W/Adventives	1	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	2.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	2.4	P-Forb	1	16.70%	P-Forb	1	16.70%
	NATIVE MEAN W	-3	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.7	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	16.70%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 27 -	NATIVE SPECIES	1	Native	1	100.00%	Adventive	0	0.00%
Wetland	Total Species	1	Tree	0	0.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	1	Shrub	1	100.00%	Shrub	0	0.00%
33	W/Adventives	1	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	1	P-Forb	0	0.00%	P-Forb	0	0.00%
	NATIVE MEAN W	-2	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 27 -	NATIVE SPECIES	7	Native	7	70.00%	Adventive	3	30.00%
Wetland	Total Species	10	Tree	0	0.00%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.9	Shrub	0	0.00%	Shrub	0	0.00%
48	W/Adventives	2	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	7.6	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	6.3	P-Forb	4	40.00%	P-Forb	2	20.00%
	NATIVE MEAN W	-3.7	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.9	A-Forb	2	20.00%	A-Forb	1	10.00%
	Fac. Wetland (+)	AVG:	P-Grass	1	10.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 27 -	NATIVE SPECIES	2	Native	2	66.70%	Adventive	1	33.30%
Wetland	Total Species	3	Tree	1	33.30%	Tree	1	33.30%
Complex	NATIVE MEAN C	1.5	Shrub	0	0.00%	Shrub	0	0.00%
49	W/Adventives	1	W-Vine	1	33.30%	W-Vine	0	0.00%
	NATIVE FQI	2.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	1.7	P-Forb	0	0.00%	P-Forb	0	0.00%
	NATIVE MEAN W	-2	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	0.3	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 28	NATIVE SPECIES	35	Native	35	92.10%	Adventive	3	7.90%
	Total Species	38	Tree	6	15.80%	Tree	0	0.00%
	NATIVE MEAN C	3.4	Shrub	4	10.50%	Shrub	0	0.00%
	W/Adventives	3.1	W-Vine	1	2.60%	W-Vine	1	2.60%
	NATIVE FQI	19.9	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	19.1	P-Forb	17	44.70%	P-Forb	1	2.60%
	NATIVE MEAN W	-2.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.1	A-Forb	1	2.60%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	1	2.60%	P-Grass	1	2.60%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	4	10.50%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	2.60%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 29 -	NATIVE SPECIES	19	Native	19	86.40%	Adventive	3	13.60%
Wetland	Total Species	22	Tree	2	9.10%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.4	Shrub	1	4.50%	Shrub	0	0.00%
4	W/Adventives	2	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	10.3	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	9.6	P-Forb	10	45.50%	P-Forb	3	13.60%
	NATIVE MEAN W	-1.7	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-1.6	A-Forb	3	13.60%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	2	9.10%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	4.50%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 29 -	NATIVE SPECIES	13	Native	13	100.00%	Adventive	0	0.00%
Wetland	Total Species	13	Tree	2	15.40%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.5	Shrub	0	0.00%	Shrub	0	0.00%
5	W/Adventives	2.5	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	8.9	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	8.9	P-Forb	7	53.80%	P-Forb	0	0.00%
	NATIVE MEAN W	-3.1	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3.1	A-Forb	1	7.70%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	7.70%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	2	15.40%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 29 -	NATIVE SPECIES	10	Native	10	90.90%	Adventive	1	9.10%
Wetland	Total Species	11	Tree	2	18.20%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.6	Shrub	1	9.10%	Shrub	0	0.00%
6	W/Adventives	2.4	W-Vine	1	9.10%	W-Vine	0	0.00%
	NATIVE FQI	8.2	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	7.8	P-Forb	5	45.50%	P-Forb	1	9.10%
	NATIVE MEAN W	-2.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.2	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	9.10%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 29 -	NATIVE SPECIES	10	Native	10	90.90%	Adventive	1	9.10%
Wetland	Total Species	11	Tree	2	18.20%	Tree	0	0.00%
Complex	NATIVE MEAN C	2.6	Shrub	1	9.10%	Shrub	0	0.00%
7	W/Adventives	2.4	W-Vine	1	9.10%	W-Vine	0	0.00%
	NATIVE FQI	8.2	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	7.8	P-Forb	5	45.50%	P-Forb	1	9.10%
	NATIVE MEAN W	-2.4	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.2	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	0	0.00%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	1	9.10%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			

Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 30	NATIVE SPECIES	38	Native	38	88.40%	Adventive	5	11.60%
	Total Species	43	Tree	5	11.60%	Tree	1	2.30%
	NATIVE MEAN C	3.1	Shrub	8	18.60%	Shrub	1	2.30%
	W/Adventives	2.7	W-Vine	2	4.70%	W-Vine	0	0.00%
	NATIVE FQI	19.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	18	P-Forb	14	32.60%	P-Forb	3	7.00%
	NATIVE MEAN W	-3.1	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-3	A-Forb	2	4.70%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	2.30%	P-Grass	0	0.00%
			A-Grass	1	2.30%	A-Grass	0	0.00%
			P-Sedge	4	9.30%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	2.30%			
Area 31	NATIVE SPECIES	11	Native	11	84.60%	Adventive	2	15.40%
	Total Species	13	Tree	3	23.10%	Tree	0	0.00%
	NATIVE MEAN C	1.3	Shrub	1	7.70%	Shrub	0	0.00%
	W/Adventives	1.1	W-Vine	0	0.00%	W-Vine	0	0.00%
	NATIVE FQI	4.2	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	3.9	P-Forb	3	23.10%	P-Forb	2	15.40%
	NATIVE MEAN W	-2.5	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.5	A-Forb	1	7.70%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	2	15.40%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	7.70%			



Area	Floristic Quality Assessment							
	Floristic Quality Summary		Physiognomy	Number	Percent	Physiognomy	Number	Percent
Area 32	NATIVE SPECIES	12	Native	12	85.70%	Adventive	2	14.30%
	Total Species	14	Tree	2	14.30%	Tree	0	0.00%
	NATIVE MEAN C	1.8	Shrub	2	14.30%	Shrub	0	0.00%
	W/Adventives	1.5	W-Vine	2	14.30%	W-Vine	0	0.00%
	NATIVE FQI	6.1	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	5.6	P-Forb	5	35.70%	P-Forb	1	7.10%
	NATIVE MEAN W	-2.5	B-Forb	0	0.00%	B-Forb	1	7.10%
	W/Adventives	-2.1	A-Forb	0	0.00%	A-Forb	0	0.00%
	Fac. Wetland (-)	AVG:	P-Grass	1	7.10%	P-Grass	0	0.00%
			A-Grass	0	0.00%	A-Grass	0	0.00%
			P-Sedge	0	0.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	0	0.00%			
Area 33	NATIVE SPECIES	27	Native	27	90.00%	Adventive	3	10.00%
	Total Species	30	Tree	3	10.00%	Tree	0	0.00%
	NATIVE MEAN C	2.6	Shrub	5	16.70%	Shrub	1	3.30%
	W/Adventives	2.4	W-Vine	2	6.70%	W-Vine	0	0.00%
	NATIVE FQI	13.7	H-Vine	0	0.00%	H-Vine	0	0.00%
	W/Adventives	13	P-Forb	10	33.30%	P-Forb	2	6.70%
	NATIVE MEAN W	-3.2	B-Forb	0	0.00%	B-Forb	0	0.00%
	W/Adventives	-2.9	A-Forb	1	3.30%	A-Forb	0	0.00%
	Fac. Wetland	AVG:	P-Grass	1	3.30%	P-Grass	0	0.00%
			A-Grass	1	3.30%	A-Grass	0	0.00%
			P-Sedge	3	10.00%	P-Sedge	0	0.00%
			A-Sedge	0	0.00%	A-Sedge	0	0.00%
			Fern	1	3.30%			

## **ATTACHMENT C-6**

Table 3.4

Black River Sediment Sample Results

**Table 3.4      Black River Sediment Sample Results**

<b>Sample</b>	<b>Dominant Substrate Type</b>
1	Coarse Sand
2	Silt, Clay, Organics
3	Silt, Clay, Organics
4	Coarse Sand
5	Silt, Clay, Organics
6	Silt, Clay, Organics
7	Silt, Clay, Organics
8	Silt, Clay, Organics
9	Silt, Clay, Organics
10	Silt, Clay, Organics
11	Silt, Clay, Organics
12	Silt, Clay, Organics
13	Silt, Clay, Organics
14	Silt, Clay, Organics

## **ATTACHMENT C-7**

Table 4.1

Habitat Areas Impacted by Blue Water Bridge Plaza Alternatives

**Table 4.1 Habitat Areas Impacted by Blue Water Bridge Plaza Alternatives**

Habitat Area		FQI	Alternative 1	Alternative 2	Alternative 3
1		8.2	X	X	X
2		9.2			
3		9			
4		3.3			X
5		0.9			X
6		1.5			X
7		2.1			X
8		13.2			X
9		5.2			X
10		0.4			X
11		0.4			X
12		9.8			X
13		11.5	X	X	X
14	Wetland Complex 45	3.8	X	X	X
	Wetland Complex 46	3.1	X	X	X
	Wetland Complex 47	4	X	X	X
15		4.6			
16		3.4			X
17		6			X
18		11.5			X
19		7.8			X
20		5.8			
21		13.2			X
22		9.4			X
23		8.8			
24		6.2			
25	Wetland Complex 24	7			X
	Wetland Complex 25	7.6			
	Wetland Complex 26	14.9			X
	Wetland Complex 27	11.8			
	Wetland Complex 28	12.8			
	Wetland Complex 29	4.5			
	Wetland Complex 30	6.3			
26	Wetland Complex 31	9			
	Wetland Complex 22	6.8			X
	Wetland Complex 23	3.9			X

Habitat Area		FQI	Alternative 1	Alternative 2	Alternative 3
27	Wetland Complex 10	2.2			
	Wetland Complex 14	3			
	Wetland Complex 16	4.3			X
	Wetland Complex 32	2.4			
	Wetland Complex 33	1			
	Wetland Complex 48	6.3	X	X	X
	Wetland Complex 49	1.7	X	X	X
28		19.1			
29	Wetland Complex 4	9.6			
	Wetland Complex 5	8.9			X
	Wetland Complex 6	7.8			X
	Wetland Complex 7	7.8			X
30		18			
31		3.9			
32		5.6			
33		13			X



## **APPENDIX D**

### Photographs of Habitat Areas



AREA 1



AREA 4



AREA 5



AREA 6



AREA 7



AREA 8



















AREA 32

